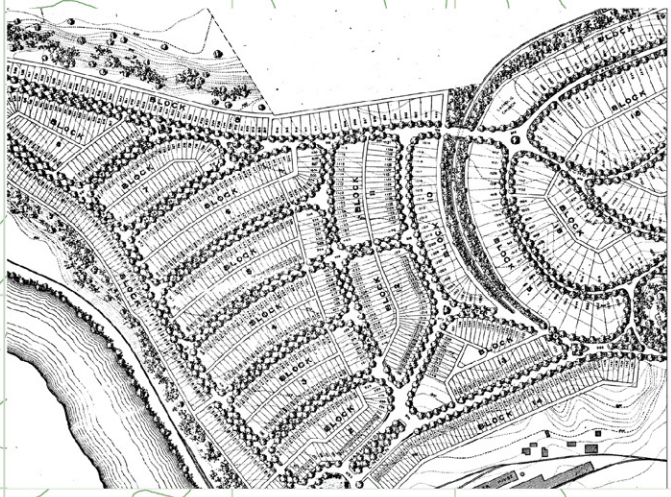
Capital's Utopia

VANDERGRIFT, PENNSYLVANIA, 1855–1916



Anne E. Mosher

VISIT…

Capital's Utopia

Creating the North American Landscape

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Capital's Utopia

Vandergrift, Pennsylvania, 1855–1916

Anne E. Mosher

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To my mother, Lois,
the memory of my father, DeWitt,
and the memory of my friend and colleague, Glenda Laws

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Preface

Three names figure prominently in the historical narrative that I present in this book: Frederick Law Olmsted, George McMurtry, and Jacob Jay Vandergrift. I first heard of Olmsted during an undergraduate urban geography course taught by David Lanegran at Macalester College in St. Paul, Minnesota. This course sparked my long-term research interest in the geography and history of American urban landscape. Lanegran required students to go outside of the classroom to explore St. Paul's downtown, inner-city residential neighborhoods, industrial districts, and suburbs. We were to use these urban spaces as proving grounds (or disproving grounds) for the models and theories we had learned about in lectures. Guided by a set tour itinerary and dozens of research questions to ponder in our field notes, we individually investigated and wrote about the political and social struggles that underpinned St. Paul's urban plans, policies, spatial organization, and landscape. For many members of the class, this was a perspective-altering experience. I certainly came away seeing cities in a new way.

My St. Paul field notes record the germs for ideas that now occupy a central place in my thinking about urban planning and its relationship to the making of urban landscape. First, I noted that when St. Paul's planners and politicians devised urban designs or enacted public policy, they did so to mitigate a perceived set of urban problems and to achieve some idealized notion of what their city should be. I would learn much later in my academic career that this basic urban-planning philosophy reflects much broader currents of modernist thought, with its practitioners' overwhelming desire to impose order on what they perceive to be the chaos of the world.[1] Second, I found that even after their plans had been implemented, there were vast differences between the planners' "ideal St. Paul(s)" and the "real" landscape and social community in which I lived. Urban visions seldom translate directly into tangible bricks-and-mortar landscape. Third, the plans or policies that came closest to producing a concordance between urban visions and urban landscape had been shepherded along by persuasive and powerful local figures, special-interest groups, or coalitions. In lec-

ture, Lanegran provided some historical context for this last point when he taught us about some of the key personalities from American urban-planning history, including Frederick Law Olmsted Sr., Daniel Burnham, and Robert Moses.[2] At various points in their careers, Olmsted, Burnham, and Moses were each effective negotiators who inspired widespread public commitment to their plans or they had the ability to marshal the economic resources necessary to translate their urban visions into reality. At other times, however, their plans fell flat or were only partially realized.[3]

Although I learned about the Olmsted landscape firm as an undergraduate geography major, I did not encounter George McMurtry until my Ph.D. program in geography at Penn State. I was intrigued by the history of urban planning in general and by the late-nineteenth-century development of comprehensive planning in particular. For my dissertation, I wanted to explore why early comprehensive infrastructure planning ideals were often translated into urban landscape in such piecemeal fashion and with such variation from place to place. I decided to focus on, first, the 1893 Chicago World's Columbian Exposition, a small-scale demonstration of how closely an "urban" landscape could reflect visionary urban ideals (moreover, Daniel Burnham and Frederick Law Olmsted Sr. were two of the key figures involved in its planning); second, Warren Manning's 1901 City Beautiful plan for Harrisburg, Pennsylvania (the city closest to my home in Central Pennsylvania, where an early comprehensive infrastructure plan had been executed and partially adopted); and third, an undetermined Pennsylvania company town (where I presumed urban visions and ideals would coincide closely, given capital's supposed hegemony over property and residents).

In the process of looking for an "accessible," comprehensively planned, and relatively unstudied company town, I asked Edward K. Muller of the University of Pittsburgh's history department for suggestions. In turn, Dr. Muller generated a candidate list of seven towns. When I started conducting background research on each place, I found an entry about Vandergrift in a 1915 Westmoreland County history that made this particular town seem almost too good to be true:

> *Vandergrift*—The "Iron Age," the great trade journal of the country, in 1901, in an able descriptive article on Vandergrift, styled it as The Workingman's Paradise. Aside from Pullman, Illinois, Vandergrift is one of the most striking and unique places in America. It is thirty-eight miles up the Allegheny and Kiskiminetas rivers from Pittsburgh, on the West Penn Railroad. It was plotted on a four hundred acre

> tract of farm land purchased by the Apollo Iron and Steel Company some years before the town was founded. The late Captain J. J. Vandergrift, a heavy stockholder in the Apollo Company, and a resident of Pittsburgh, was at the head of the enterprise, and from him the town took its name. The Vandergrift Land and Improvement Company was founded, with George G. McMurtry as its president. The plotting of the town site, with the iron industry back of it, the laying out of a home for the immense works, second to none in the whole country, was executed in 1895 and 1896. The plan of the place was carefully made after an extensive tour of inspection of the great factory districts of Europe. It was laid out by Frederick Law Olmstead [*sic*], who had been the architect and landscape gardener of the World's Columbian Exposition, in Chicago, in 1893.
>
> The streets and blocks are circular in form, no streets nor avenues crossing at right angles but all on gentle curves. The town stands on a charming tableland, while its adjacent borough, Vandergrift Heights, occupies the hillside. The town was plotted, its streets paved with brick of the most lasting grade, its sewerage and water pipes laid, grades established and marked, before any lots were sold.[4]

Vandergrift appeared to have been created with comprehensive infrastructure and land-use planning ideals in mind. It also had connections with Olmsted and the Chicago World's Fair. Moreover, the 1915 description suggested that at least two important individuals played critical roles in the creation of this company town. I needed to find out more about these men and their plans for Vandergrift.[5]

The search for primary information about J. J. Vandergrift and George McMurtry proved to be a great challenge. Although Jacob Jay Vandergrift Sr. was one of John D. Rockefeller Sr.'s partners in Standard Oil and McMurtry eventually became an executive with the United States Steel Corporation, their personal papers have (to date) not been found (if they still exist at all). And, if there are any relevant J. J. Vandergrift and McMurtry business records, they are locked inside the United States Steel Corporation's closed archives. Thus, to study the town, its plan, and progenitors, I came to rely on four major sources: the Olmsted firm's papers in the Manuscript Division of the Library of Congress; the U.S. federal manuscript census of population; Penn State's superb collection of Sanborn fire-insurance maps in Pattee Library; and various public documents and newspapers held by the Borough of Vandergrift, the public libraries in Vandergrift and Apollo, Pennsylvania, and the Westmoreland and Armstrong county courthouses.

Before I started to use any of these historical sources, however, I made a reconnaissance trip to Vandergrift. What I learned there prompted me make significant changes to my project's original research design. I soon dropped the Chicago Exposition and Harrisburg Plan to focus solely on Vandergrift's significance to American urban-planning history and to the geographical history of American industry and labor.

Upon my arrival in Vandergrift, Mayor Jim Kerr arranged a meeting with several residents who were interested in the town's history, including local historian John "Jack" Owens. In an upstairs conference room in the town's municipal building (named the Casino), I told this group about my research interests. In return, they captivated me with some of their fondest Vandergrift memories. Throughout, however, Owens, the historian, remained stern and silent. Finally he spoke, becoming positively animated as he told us a story about a century-long process of town- and community-building punctuated by labor unrest, social friction, rapid population growth, and equally rapid economic stagnation and decline. He agreed with me that my proposed study of the Vandergrift town plan would be interesting, but added that I shouldn't paint too rosy a picture of George McMurtry:

> He made a pretty town, but some people thought he was an SOB. He built Vandergrift because he couldn't control the union workers at his steel mill in Apollo. After he built the new mill and town at Vandergrift, scabs and nonunion steelworkers got first crack at jobs and buying houses. All the others had to stay out, including the immigrants. That's why Vandergrift Heights became Italian and East Vandergrift became eastern European. McMurtry even had a fence built between East Vandergrift and Vandergrift to keep the eastern Europeans out. *That's* the history you should write.[6]

To Owens, the McMurtry-Olmsted plan had merely been part of the stage on which a real social and political drama had played out. As far as he was concerned, a decent interpretation of the town needed to consider far more than the material things (infrastructure, plan, and landscape) that had initially piqued my geographical curiosity.

Returning home to Penn State, I could not get Owens's suggestion out of my mind. It sparked all sorts of new questions regarding Vandergrift. If McMurtry created the town in order to control his workforce, what was it that made this workforce so unruly in the first place? Did he have better luck controlling it at Vandergrift? Did the Olmsted town plan possess special attributes that would

help McMurtry achieve and maintain control? Is this why he hired the Olmsted firm as opposed to a local surveyor? And what about this interesting ethnic geography that Owens mentioned: was it deliberately segregated? If so, why? Finally, what *is* the larger significance of Vandergrift to planning history and to a geographical interpretation of the steel industry and American labor history?

To help me develop answers to these questions, Ted Muller, at Pitt, and Carol Lee, of the Pennsylvania Historical and Museum Commission (then of Penn State's history department), guided me through the supporting literature on the late-nineteenth-century steel industry and southwestern Pennsylvania labor history. I also searched the geography literature for concepts and theoretical frameworks that would help disentangle and explain the relationships I had discovered at Vandergrift between urban planning, landscape, industrial change, and social control. During the postdoctoral phase of this process at Louisiana State University, my thinking came to be profoundly influenced by the work of, and through conversations with, geographical historian Carville Earle.

In the late-1970s, Earle (who is, by training, a geographer) staked out a theoretical position that at the time was quite different from that occupied by many geographers who studied the past. Typically, "historical geographers" studied, first, geographical changes as they occurred in the past in order to identify evolving spatial patterns, or, second, they explained the visual appearance of present-day landscapes by detailing their historical development. Within the North American academic community, this work often focused on writing comprehensive geographical accounts of regional development such as "The Maritimes," "The Southwest," or "The Upper Midwest."[7] Instead, Earle believed that the "geographical perspective" might be used to shed new light on, and perhaps help reconfigure conventional answers to, time-honored questions posed and explored by historians. His focus, therefore, was not so much on making a comprehensive historical and geographical regional account; instead, he zeroed in on specific historical themes or ongoing interpretive debates related to the region. Writing comprehensive regional historical geographies was not Earle's goal; he took existing historical interpretations of local, regional, or national issues and augmented them, recast them, and revised them.

Earle thus became one in a growing chorus of academic voices that urged a two-pronged reexamination of the relationship between the disciplines of history and geography. On the one hand, Earle cautioned historians to think about geography as more than a mere backdrop or stage on which history unfolds. "Thinking geographically" about historical problems encourages historians not

only to address questions of location and natural environment but also to invoke spatial concepts such as "scale," "concentration," "diffusion," "distance decay," and "connectivity."

On the other hand, Earle's argument prompted (or perhaps paralleled the effort of) some historical geographers to reconsider history as something more than simply a "prelude to the present," a process that culminates in geographical patterns, or a series of landmark events that occur in a locale. For geographers to "think historically," they need to think critically about the ways in which the past is reported, interpreted, and reinterpreted. In other words, they need to think about the politics of representation and interpretation. Although historians are trained in and routinely write about such matters, geographers have not always interrogated in print the reliability of (primary and secondary) sources or the political context in which they were produced. There are certainly exceptions to this rule, but historical geographers often give the impression that they accept their sources (data) as "fact." Doing so not only raises serious questions about source validity but can also shut down the possibility of exploring multiple interpretations of the same place.

In the process of identifying a corpus of geographical concepts and theories that would help me develop a geographical historical interpretation (as opposed to a historical geographic one, as has been traditional) of Vandergrift, geographers Deryck Holdsworth, Rod Erickson, David Ward, and Peter Gould steered me toward work within the so-called new economic geography on the process of industrial restructuring. Holdsworth in particular helped me to see that the reasons why southwestern Pennsylvania's iron and steel companies tended to "change their technological inputs, outputs, markets, labor costs, and locations over time" also helped to explain McMurtry's actions at Vandergrift.[8]

A number of other people assisted in the research and writing of this book. They include the employees of the Armstrong County Tax Assessment Office in Kittanning, Pennsylvania; the Westmoreland County Microfilming Department and Recorder's Office in Greensburg, Pennsylvania; the Manuscript Division at the Library of Congress in Washington, D.C.; and Pennsylvania State University's Pattee Library. In Vandergrift, Pennsylvania, former Mayor Jim Kerr, Borough Treasurer Stephen Delledonne, Jack Owens, Marybelle Stramm, and Leland Fitzgerald gave their time and spoke candidly about their town's history. Two other Vandergrift residents, Fran Bills and Eugene Iagnemma, were particularly helpful: consistently supportive of my work and enthusiastic about

my ideas, they went beyond the call of duty to help. To both, I extend my heartiest thanks.

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Capital's Utopia

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Introduction

In 1895, Pittsburgh steelmaster George Gibson McMurtry hired the renowned Boston landscape design firm of Olmsted, Olmsted & Eliot to translate an elaborate urban vision into a design for a model industrial town. This town, to be called Vandergrift, would be built in southwestern Pennsylvania, about forty miles northeast of Pittsburgh. Captivated by George McMurtry's ideas, John Charles Olmsted and Charles Eliot rendered a design reminiscent of the romantic upper-middle-class residential suburbs that their firm had created earlier in the nineteenth century for places like Riverside, Illinois, and Sudbrook, Maryland (fig. I.1). Graceful, curvilinear streets, tastefully arranged oriental trees and shrubs, a full complement of infrastructure, and a long list of restrictive covenants were meant to ensure that the new town of Vandergrift would live up to McMurtry's expectations.

Less than a year into the planning process, McMurtry began to question Olmsted and Eliot about their design and, negotiating one design modification after another, altered the street layout, lot cadastre, park placement, and general land-use pattern. In the end, the enthusiasm that John Olmsted once had for the project waned so much that he did not want his family name to be linked with

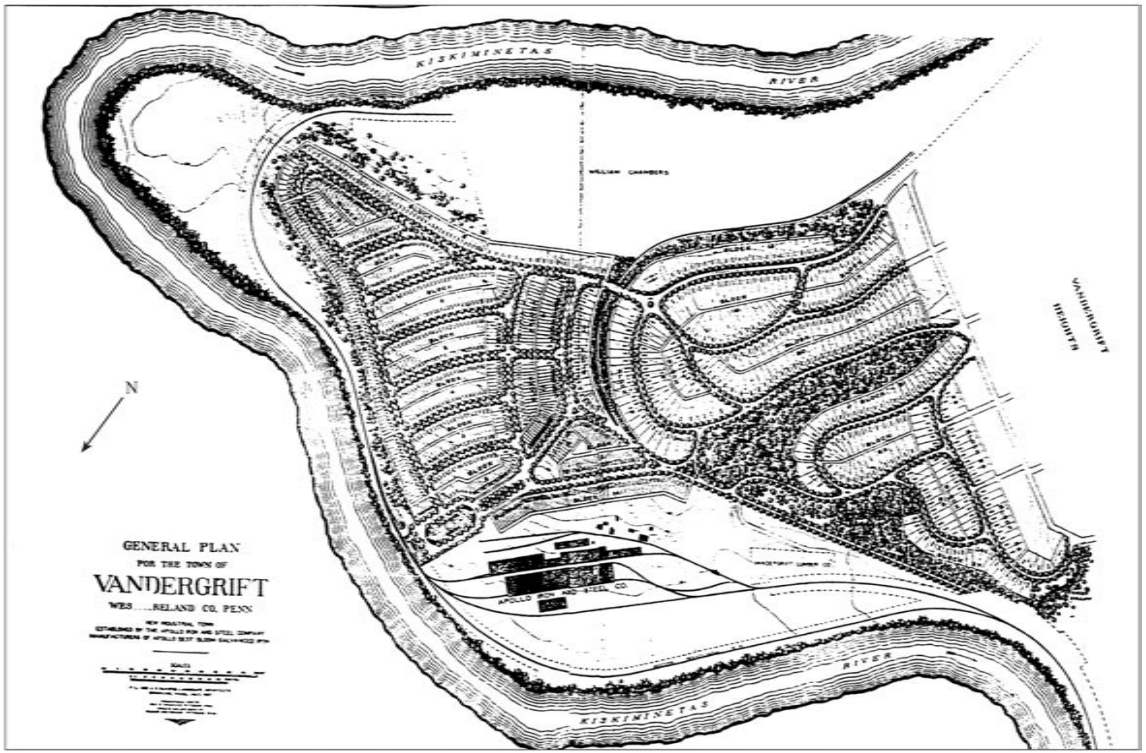

Fig. I.1. Plan for Vandergrift by Olmsted, Olmsted & Eliot, 1896. (Plan reproduced courtesy of the Division of Rare and Manuscript Collections, Cornell University Library, Ithaca, N.Y. Frederick Law Olmsted Architectural Drawings and Plans, file #462.)

it. McMurtry, however, went on with the scheme, building and marketing to his business partners and employees a greatly diluted version of the original Olmsted Vandergrift plan. By 1900, the urban settlement surrounding his firm's new, fully integrated sheet-rolling steel mill had attracted a population of forty-three hundred. Like many North American urban spaces for which grand plans have been devised, the resulting landscape in which these residents lived and worked differed substantially in appearance from McMurtry's original vision and, obviously, from Olmsted and Eliot's first design. This book explains why.

The argument presented in this book rests on the idea that urban visions are seldom smoothly and inexorably translated into urban design and then into urban landscape—even when shepherded along by politically or economically powerful individuals. First, in a democratic capitalist society like the United States, the planning process is necessarily fraught with tension—between ideals that elevate (or demote) the common "public good" and ideals that strengthen (or weaken) the abilities of an individual or business entity to exercise their property rights. Plans can thus be modified before building occurs if government officials feel that the public good is not properly served or if the rights of individual property owners have been threatened. Citizens, too, theoretically have the right to comment upon the plans that have been made "on their behalf." (I use the word *theoretically* because in the United States most planning decisions go uncontested—perhaps because they deal with quite mundane issues—or are challenged by individuals or groups who lack the power to effect change. Nevertheless, American urban history is punctuated by many notable cases where the public questioned plans and managed to have them modified, if not stopped altogether.)[1]

Second, unless planners, developers, or government officials maintain strict and continued hegemonic control over the landscape after the plan has been translated into reality (or unless their plans have been codified into law), users may decide to do something different with the landscape than what was initially intended. There may be vast differences between the planner's desired use of an urban space and what the public or private interests actually do in and to it.[2] Third, such after-the-fact modifications may necessitate (at least from the planner's, developers or politician's perspective) the imposition of additional rules and regulations regarding land use and public activities. Such rules may be enacted to keep the landscape true to the original plan; or they may be responses to unanticipated spin-off conditions and externality effects.[3] Thus, public ver-

sus private debates, the ratcheting down over time of control by power brokers, developers, planners, and government, the extent and effectiveness of citizen participation, and unforeseen conditions can each dilute the initial intentions for an urban space.[4] All of these diluting influences can shape how a place's landscape and social community turn out.

Steelmaster George McMurtry, the Vandergrift founder, had much in common with Frederick Law Olmsted Sr., Daniel Burnham, and Robert Moses at the point in his career when he created an urban vision (and then an urban landscape) for his employees at Vandergrift. As we will see, he was above all a very skilled negotiator. His plans inspired other industrialists as well as members of his own workforce. He convinced his friends to contribute large sums of capital to carry out his projects. He created a very plausible marketing package for Vandergrift that confounded (if not masked) his company's private intentions and "business considerations." Nevertheless, there were limits to what McMurtry could do during each phase (conceptualization, surveying and building, settlement) of the Vandergrift project. In short, the business, technological, sociopolitical, and local contexts in which McMurtry and his Apollo Iron and Steel Company existed each constrained his ability to dominate Vandergrift. These contexts explain why McMurtry's initial conceptualization for Vandergrift differed from the first Olmsted rendering and why both the McMurtry and Olmsted plans ultimately differed from the landscape and social community that eventually developed.

Pursuant to Earle's arguments about the possibilities for "geographical history," in this book I use numerous geographical concepts (and even a model or two) related to industrial restructuring theory to address a larger historiographic question that underpins Vandergrift's creation: why did the late-nineteenth- and early-twentieth-century U.S. labor movement have such difficulties achieving its objectives? I also directly examine the politics that surround the competing contemporary and historical interpretations that evolved for the town. In many instances, I also discuss the problems that I encountered with primary and secondary historical sources and acknowledge the ambiguities that they raise.[5]

An understanding of industrial restructuring as it occurred within the steel industry is required if one is to build—as Jack Owens suggested—an interpretation of Vandergrift that considers the social relations that had a such a decisive impact on urban design, landscape, and how the place eventually turned out as a social community.[6]

Table I.1. Basic Components of Industrial Restructuring within Nineteenth-Century Iron- and Steelmaking Firms

Technological Change (application of new or modified production technologies and production processes)
Process innovation
Installation of new equipment
Rationalization (efficiency)
Sociopolitical Change (modification of the division of labor and social power structure within the production process)
New labor requirements → Workforce adjustments (de-skilling and white-collarization)
New work rules
Restructured wage/social hierarchy
New "social contracts" between capital and labor
Managerial Change (reorganization of business enterprise)
Inclusion of partners and new investors
Legal reconstitution of the firm
Consolidation
Integration
Creation of specialized departments, divisions, or subsidiary companies
New chains of command within the firm
New management policies
New business linkages with suppliers, competitors, and buyers

The industrial restructuring that prompted McMurtry's creation of Vandergrift's plan and social community and the later modifications of it consisted of three components—one technological, another sociopolitical, and another managerial. Each could foster profound geographical transformations at many spatial scales (table I.1). Together, they created, modified, and caused the abandonment of production sites, industrial towns, and regions. Below I briefly explore each of these industrial changes and a few of their possible geographic outcomes.

In the iron and steel industries of the late-nineteenth and early-twentieth century, technological changes amounted to the application of new or modified production technologies and production processes. This involved installing new equipment at sites where iron was produced and the implementation of more efficient production techniques. After the mid-1870s, these modifications were aimed at allowing manufacturers to produce specialty items or steel. Although the steelmaking process was similar in concept to iron making, it required dif-

ferent equipment. The large capital investments needed to place equipment in the mills also encouraged many steelmakers to rationalize and standardize production so as to speed the transformation of natural resources into steel goods. Such changes dramatically altered the layout of production sites.[7]

Sociopolitical changes occurred within the iron and steel industry when firms modified the division of labor and social power structure within the production process. The makers of iron and steel adjusted their workforces to fit the overall labor requirements of the production process more closely. They also implemented new work rules (work regimes), restructured wages, and tried to interact with labor in ways that would reduce costs, improve efficiency, and prevent strikes and other labor disputes from interrupting production. The impacts of these changes spilled out of the production site to influence the social life, political atmosphere, demographic structure, and geography of industrial communities.[8]

Managerial change was an aspect of the reorganization of business enterprise. Any one of a number of activities, or a combination of them, might lead to this type of restructuring. It could occur if a firm sought inclusion of partners and new investors; if it reconstituted the firm into an entity in which individual investors were not legally liable for financial loss; if it created specialized departments, divisions, or subsidiary companies; or if it developed new chains of command within the firm, initiated new management policies, or fostered new linkages with suppliers, competitors, and buyers.[9] Geographical shifts in the location of production and management activities within industries and over large regions reflected this sort of change.[10]

How industrial restructuring occurred historically and geographically in southwestern Pennsylvania explains many things: the militancy of McMurtry's workers in the town of Apollo; McMurtry's agenda of social control at Vandergrift; the reasons why McMurtry hired the Olmsteds; the vast differences between McMurtry's agenda and the Olmsted plan; why Vandergrift's landscape and social community came to life in ways that McMurtry did not fully anticipate; and the important role that Vandergrift's skilled nonunion steelworkers played in thwarting labor organization in southwestern Pennsylvania during the 1900s. The industrial restructuring process, however, did not occur smoothly and inexorably. Business structures, production technologies, and labor relations could remain quite stable for years at a time only to be suddenly and irrevocably changed within a short period. It is those sudden bursts of industrial restructuring activity that turn out to be quite significant to understanding Van-

dergrift. During those periods, McMurtry and his business partners needed to experiment, adjust, and adapt—or face the possibility of going out of business.

Two especially intense industrial restructuring phases occurred in southwestern Pennsylvania's iron and steel industries during the late-nineteenth century. The first, between 1864 and 1874, involved local experimentation by local iron makers in tinplate production; the second, between 1883 and 1894, saw the rise of the southwestern Pennsylvania steel industry. These two phases significantly transformed landscape and social patterns within the Kiskiminetas Valley, the area in which McMurtry's Apollo Iron and Steel Company operated. Part 1 of this book focuses on them as antecedents to the creation of Vandergrift.

Less than a century after McMurtry founded Vandergrift, in the mid-1980s, the town's steel mill (like many others in southwestern Pennsylvania) was almost completely abandoned due to a late-twentieth-century phase of steel industry restructuring. With it came out-migration and a community sense of uncertainty. In the early 1990s, however, a local historic preservation movement emerged in Vandergrift to rejuvenate the town's "collective memory" and "sense of place" and to help breath new life into the town's economy. Successful though it may have been, this movement tended to downplay the impact that labor disputes had on Vandergrift's foundation and early history. It privileged the fact that the Olmsted landscape firm designed the town. While such an emphasis on planning is understandable given Olmsted's current national popularity and the town's need to attract (or retain) investors who would restore houses and public buildings, such an interpretation makes the steel company and McMurtry's motives seem quite altruistic.

As historian Jack Owens suggested to me in 1986, however, this altruistic interpretation runs parallel to another possible interpretation: when they created Vandergrift, McMurtry and Apollo Iron and Steel were subscribing to agendas of social control and economic profit. Thus labor relations are just as much an underlying theme in the creation of Vandergrift as is comprehensive urban planning. Part 2 of this book details not only McMurtry's collaboration with the Olmsted firm but also traces the development of his social and economic agendas. Apollo Iron and Steel wanted, at the very least, to break even with the town-building project; at the most, it wanted to cultivate a docile nonunion workforce. To achieve both of these goals the company actively promoted homeownership at Vandergrift. As a consequence, Vandergrift differed from standard company towns in that it was intended as a real-estate venture.

Part 3 assesses the extent to which McMurtry and Apollo Iron and Steel suc-

ceeded in meeting their economic and social agendas for the town. Despite some of the criticisms that can be leveled at the town plan on aesthetic and engineering grounds, at least during the 1900s and 1910s, not only prominent members of the steel industry but also people in social-reform circles believed Vandergrift to be a model that manufacturers should emulate when dealing with labor. In their opinion, Vandergrift had grown to become capital's utopia—a productive, compliant, and seemingly democratic landscape and social community that guaranteed corporate profit. Organized labor, however, following its experience during labor disputes in 1893, 1901, and 1909, saw the place quite differently.

Part 1 / Vandergrift's Antecedents

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CHAPTER ONE

Experimentation in the Kiskiminetas Valley Iron Industry

Experimentation is an essential element of industrial restructuring. Manufacturing firms invariably translate their decision to produce new items or to institute new production techniques into a search—for the most appropriate material inputs, equipment, work processes, and workforce configuration. Successful experimentation leads to greater competitiveness within the industry, a larger product market, and more profit. It may also spark greater investor interest in the region in which the industry sits, the spatial expansion of existing production sites, geographical extension of production into new locations, and the irrevocable alteration of local labor markets. Failure, however, may force firms to continue searching and experimenting—that is, as long as financial resources will allow. It may also require them to scale back on production, lay off workers, look desperately for new sources of investment capital, relocate, or go out of business altogether.

Experimentation characterized the economy of southwestern Pennsylvania's Kiskiminetas Valley even before large-scale industrialization related to the rise of the steel industry. Prior to 1860, manufacturers tried repeatedly to exploit the region's natural resources of salt, coal, and iron and its proximity to Pittsburgh's

rapidly expanding urban market, only forty miles away. Most found it very difficult. Many closed their operations when natural resources and investment capital played out. Rugged topography and inadequate transportation infrastructure also thwarted attempts to routinize trade with Pittsburgh.[1]

For reasons explored later in this chapter, antebellum iron makers in the river town of Apollo had a particularly hard time making a go of it. On the eve of the Civil War, however, a handful of Pittsburgh-based entrepreneurs began injecting large sums of investment capital into Apollo's iron-rolling mill. These same investors convinced experienced ironmasters to move to the town to institute technological and workforce changes. Together, they experimented with two product shifts—from making iron nails in the early 1860s to making tin plates in the 1870s, and to making steel sheets in the 1880s. In the 1890s, however, when they decided to create Vandergrift, the model industrial town, they reoriented the focus of their experimentation from product to people and place. Understanding these successive shifts allows us to build an interpretation of Vandergrift's history and landscape that goes beyond simply paying homage to the Olmsted firm's urban design and to George McMurtry's supposed benevolent altruism in creating a model industrial town.

The Kiskiminetas Valley before Iron

Southwestern Pennsylvania's Kiskiminetas River forms the main artery of the largest watershed in the Allegheny River basin. Rainwater and snowmelt-fed creeks run through the highland forest and down the rugged western slope of the upper Allegheny Plateau to meet and form a major waterway—the Conemaugh River (fig. 1.1).[2] After the Conemaugh flows through the city of Johnstown and continues west through gaps in the Laurel Highlands and Chestnut Ridge, it joins Loyalhanna Creek near Saltsburg. Beyond this point the river is known as the Kiskiminetas. Its seasonally variable currents flow northwestward along a deep and winding twenty-mile gorge through the hilly Pittsburgh Plateau before emptying into the Allegheny River approximately twenty miles northeast of Pittsburgh.

Extremely narrow, flat strips of rich, alluvial soils dot the Kiskiminetas River's banks. Frequent floods in the 1790s kept early Euro-American settlers away from these fertile spots and forced them up onto the plateau's rocky and heavily leached soils. Kiskiminetas floodwaters had, however, greatly denuded the

Fig. 1.1. Map of Southwestern Pennsylvania.

earth's surface over the millennia, bringing numerous underground pockets of salt brine and substrata of bituminous coal within easy reach of handheld drills and shovels.[3]

Given the Kiskiminetas Valley's low population threshold and limited market range during the 1790s and 1800s, Euro-American settlers did not commercially exploit salt and coal resources. Residents reduced only enough brine into salt to

satisfy their personal household needs. Moreover, in the agricultural uplands, large stands of deciduous forest suitable for fuel (which needed to be cleared for fields and pastures anyway) made coal digging an unnecessary activity.

In the 1810s, the rapid growth of Pittsburgh—a town lying about fifty river-miles to the west of the Loyalhanna-Conemaugh confluence—presented Kiskiminetas Valley residents with a potential market for their salt. Pittsburghers demanded the substance in large quantities to preserve and enliven the taste of their food. Pioneers passing through Pittsburgh also stocked up on it before heading west to the Ohio Valley frontier.[4] But until Kiskiminetas Valley production started in earnest, merchants imported salt to Pittsburgh at great expense from either the eastern seaboard or from Kentucky.

During the late 1810s and 1820s, Kiskiminetas salt producers experimented at drilling deep wells, building elaborate wooden sluices, grading numerous evaporation ponds, and setting up boiling kettles. To heat the kettles, manufacturers burned coal taken from "drift mines" dug into the river's steep bluffs. They also provisioned their workers with produce from Kiskiminetas Valley farms. Gambling on the local salt industry's success, land speculators even established two permanent trading towns along the Kiskiminetas—Warren (founded in 1816 and later known as Apollo) and Saltsburg (1817) (fig. 1.2).[5]

Inadequate transportation links kept Kiskiminetas salt makers and Pittsburgh merchants from efficiently trading with each other, however. Unlike the Allegheny River into which it drains, the Kiskiminetas's swift currents and irregular channel made the waterway impassable to significantly sized craft for any more than a short distance. Although the river had once provided an easy canoe route for the Indian tribes who previously inhabited the area, it now presented major problems for anyone who sought to trade in bulk. The state-maintained road that led over the plateau from Warren to Pittsburgh was not much better, either. Snow and ice made it impassable during the winter, and after heavy rainstorms it was reduced to a quagmire twenty-five miles long. Pittsburgh and the Kiskiminetas Valley did not easily interact.[6]

In an attempt to solve transportation problems like these across the entire Appalachian region, in 1826 the Commonwealth of Pennsylvania authorized the construction of the Main Line Canal System. The Pennsylvania Canal Commission's plan called for the construction of a series of canals and an incline railroad to connect the Susquehanna River to the Ohio River and help Philadelphia compete with Baltimore and New York City for business in the trans-Appalachian West.[7] The commission chose the Conemaugh-Kiskiminetas-

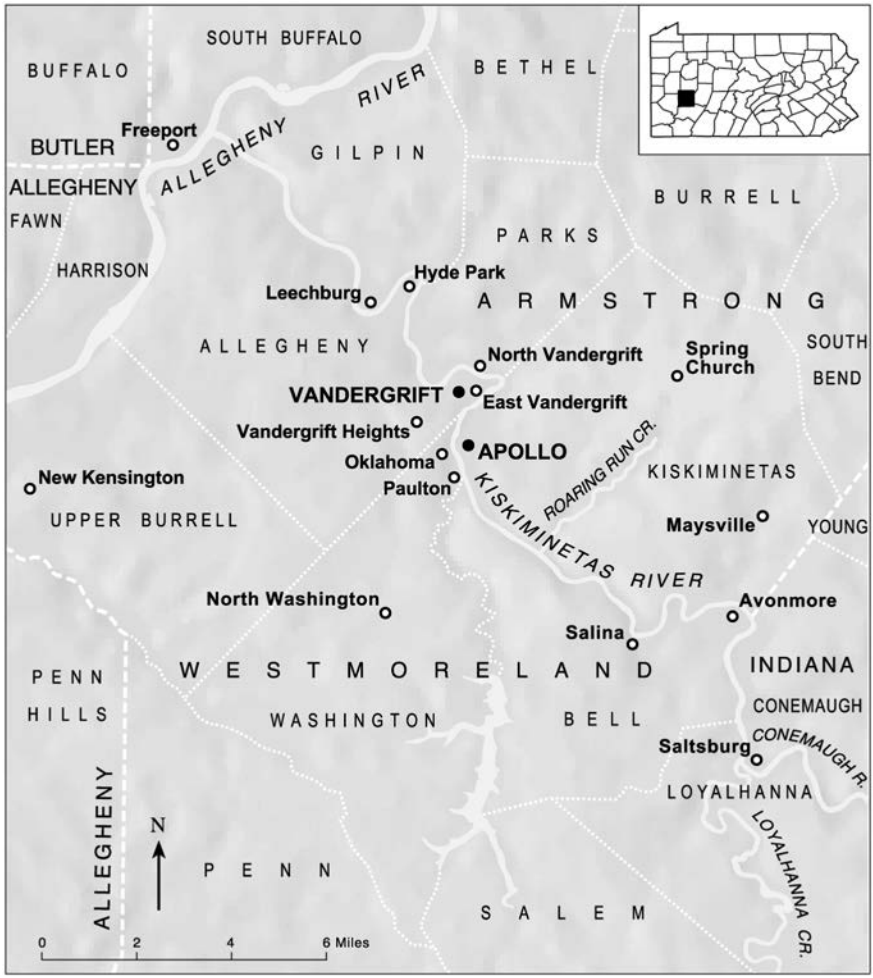

Fig. 1.2. Map of the Kiskiminetas Valley.

Allegheny Rivers to link Johnstown and Pittsburgh because they formed the most direct natural route through southwestern Pennsylvania and required the least amount of grading, digging, and construction. By 1829, work crews had dug a canal trench parallel to the Kiskiminetas River through the towns of Saltsburg and Warren. In a few spots, such as the six-mile winding and relatively tranquil stretch of river below Warren, workers did not dig a trench because, there, canal boats could be put into the river.[8]

The canal proved to be a boon for Kiskiminetas Valley residents. When the state finished the Main Line's Western Division in 1829, travel times between the valley and Pittsburgh were halved and bulk-item transportation costs decreased by two-thirds. After that, Saltsburg residents became even more focused on making salt for the Pittsburgh market. The people of Warren (who were at the northern edge of the salt-producing area where the brine was somewhat less saline and more difficult to exploit) took greater advantage of their town's proximity to forest resources, establishing a sawmill and several boat-building works.

A third town also emerged. In 1827, the canal commission hired David Leech, of Sharpsburg, Pennsylvania, to build a slackwater dam across the Kiskiminetas about six miles downstream from Warren. Boats exited the Kiskiminetas River through a lock located immediately above the dam and entered a masonry-walled canal that ran beside the river all the way to the Kiskiminetas-Allegheny confluence. Next to this dam and lock, Leech established the town of Leechburg, soon to become an important canal-craft boat-building center that served as home base for Leech's canal packet line through the 1830s and 1840s.

The canal sparked a great deal of activity along this section of its route and filled a real transportation need, but the entire scheme quickly ran into problems statewide. Rugged terrain and severe winters translated into high maintenance costs and seasonal operation. Moreover, given the extent to which fledgling railroads were cutting into the canal's business, the commonwealth had spent far more money on building the thing than it could ever hope to make in tolls. In 1841, a mere twelve years after it had been completed, the commonwealth abandoned the system, and to recoup some of the loss sold portions of the canal's route to the privately owned (and recently established) Pennsylvania Railroad (PRR). The railroad company filled in parts of the canal for use as a railroad bed and right-of-way.

In building its main line between Philadelphia and Pittsburgh in 1852, the PRR chose to take a direct overland route south of the Kiskiminetas Valley. This choice sounded the death knell for the already troubled salt industry. Decreases in brine salinity had forced salt makers near Saltsburg to dig deeper wells during the 1830s. As supplies dwindled, some manufacturers ceased operation altogether or relocated to more easily exploited deposits in the Allegheny River valley closer to Pittsburgh. A few—such as Thomas Kier, the father of future Pennsylvania oilman Samuel M. Kier—relocated to an area one county to the north to apply their salt-drilling expertise to experimentation with oil production in the forest near present-day Titusville.[9] Many former salt workers never-

theless stayed in the Kiskiminetas Valley after the industry's (and the canal's) demise. For example, William McAdoo, who arrived in the Kiskiminetas Valley from County Donegal, Ireland, in 1830 to work as a salt boiler, purchased, cleared, and improved 130 acres of Kiskiminetas Township farmland. James McAwley, a native of Huntingdon County, Pennsylvania, who in the same year came to work at Gamble's saltworks in Kiskiminetas Township, persevered in the salt business until the 1850s, but then began farming nearby with 111 acres.[10]

Even with salt's decline and the state's abandonment of the Pennsylvania Canal, the Kiskiminetas Valley population grew steadily through natural increase and in-migration, especially in the townships surrounding Leechburg and Warren. Newly arrived farm families from eastern Pennsylvania, Germany, Ireland, and Scotland occupied the arable Pittsburgh Plateau upland, and miners headed down into the Kiskiminetas's gorge and tributary hollows to work the coal deposits. Leechburg, Warren, and Saltsburg served these farmers and miners as central market places. In each town, local entrepreneurs ran general stores and saw and grist mills. There were blacksmiths, tanners, saddlemakers, shoemakers, and wagonmakers, as well as doctor's and lawyer's offices, post offices, and schools. Professional teamsters and the short-haul packets that remained in operation on the remnant canal carried surplus flour, corn, oats, barley, salt, and coal north to Allegheny River steamboat landings and south to the PRR at Blairsville. They returned to the valley with manufactured items and mail.

During the early 1850s, when the PRR's surveyors and engineers began searching for the best route for the railroad's main line through southwestern Pennsylvania, the town of Warren decided to change its name. The two events may be connected. The original name came either from an eighteenth-century resident who maintained an Indian trading post near the townsite or from a Lenni-Lenape (Delaware) Indian chief named Warren who supposedly died in the area during the colonial era. No matter whether it was the trader or the chief, in the middle of the nineteenth century Robert McKisson—Warren's leading physician, merchant grocer, druggist, town burgess, poet laureate, and postmaster—suggested that to keep up with the toponymic fashion of the day, residents should draw upon Greco-Roman mythology and change the town's name to Apollo.[11]

The name change was an attempt at urban boosterism. During the nineteenth century, in much the same way as today, many U.S. towns and cities aggressively competed with each other for population, business, and an improved position within a rapidly changing transportation network. They sought to boost the rep-

utation of their business communities, enhance their relative geographical situations, and propel themselves up the urban hierarchy through population increase. To meet these goals, their business communities created elaborate sets of place-related images. Newspaper editors wrote glowing descriptions of the superior sites and situations that their towns and cities occupied compared with other places. Civic organizations placed ads in distant newspapers, produced pamphlets, atlases, and bird's-eye-view maps that made their towns look like veritable utopias. Town names also became part of this booster arsenal of place imagery. The choice of Apollo, the name of the god of music, poetry, medicine, and prophecy, reflected a hope that the town would become the cultural and social center of the Kiskiminetas Valley.[12]

For Warren, the canal system's failure and the possibility of the railroad's arrival compounded the importance of creating such an image.[13] Warren's residents no doubt wanted the PRR to do as it had done in other parts of central and southwestern Pennsylvania—fill in the canal bed and put main-line tracks through their town. But for this to happen, the railroad needed to foresee profits greater than construction costs there; a northwesterly route along the Kiskiminetas gorge and southwest along the Allegheny River toward Pittsburgh would add twenty miles to the overland route between Blairsville and Pittsburgh.

The PRR did not build a Kiskiminetas Valley line, indicating that a mere name change was not enough impetus to extend service to Apollo. Railroad construction did not occur there for another decade (1865), when the Western Pennsylvania Railroad (WPRR) company built a line along the Kiskiminetas's west bank. The WPRR's Kiskiminetas Valley line connected the Pennsylvania Railroad main line at Blairsville to the WPRR's Allegheny Valley line at Freeport.[14]

Apollo, Leechburg, and Saltsburg grew rapidly after the railroad linked them to Pittsburgh and Johnstown. Between 1860 and 1880, population increased from 449 in Apollo and 359 in Leechburg to well over 1,000 in both towns. Saltsburg's population grew from 592 to 855. All three towns thrived as market centers for their surrounding agricultural hinterlands. The iron industry also started to add population to Apollo and Leechburg; Pittsburgh-based entrepreneurs established iron-rolling mills at Apollo in 1855 and Leechburg in 1872. Although they had a difficult time participating in the Pittsburgh-focused economy until the WPRR arrived, soon afterward their experimentation with new products and production methods made the region into the first bona fide center of tinplate manufacture in the United States.[15]

Before the Civil War the Kiskiminetas Valley's economic role in southwestern Pennsylvania thus waxed and waned with the fortunes of the salt industry, the canal, and the railroad. The canal in particular made it easier for residents to market their products outside the valley. Nevertheless, from a Pittsburgh perspective, the area remained something of an economic, social, and cultural backwater until the railroad came along.

Early Experimentation in Iron Making

The first experiments in iron making in the Kiskiminetas Valley occurred shortly before the canal arrived. According to historian Thomas J. Henry, a James Biddle established Rock Furnace near Warren in 1825, employing and housing fifty to seventy-five men at the Roaring Run—Kiskiminetas confluence. These men not only operated the furnace; they also mined iron ore from an adjacent hill and made charcoal fuel in the surrounding woods.[16]

Not much more is known about Rock Furnace. If any iron it produced was ever rolled into shapes, then that activity certainly did not occur in the Kiskiminetas Valley. Biddle abandoned Rock Furnace long before Pittsburgh residents Alex McClurg, John Kuhn, Washington McClintock, Alex Speer, James McFennemore, James Crane, and Theresa Crane established the Kiskiminetas Iron Company in 1855 and started the first rolling mill at the recently renamed town of Apollo.

Kiskiminetas Iron made iron nails and spikes. Capitalized at $25,000, its mill ran on water power derived from a Pennsylvania Canal-fed basin-and-sluice system. The products were so brittle, however, that in December 1859 all the original investors except McClintock bailed out of the venture. McClintock subsequently recruited two new partners, George and Ellen Cass, of Pittsburgh, who helped him assume Kiskiminetas Iron's more than $40,000 debt (which included a mechanic's lien of $5,400, a $2,000 mortgage held by the Western Theological Seminary, and three additional mortgages that amounted to more than $20,000).[17]

So began an important trend within Apollo's iron- and steel-producing history. Despite membership changes in the firm that ran the Apollo mill between 1855 and 1902, there was never a complete purging of owners: investors drifted in and out of the company (table 1.1). Hence, few truly abrupt changes occurred in business practices over the years. Three men, however, stand out as particularly important figures in the Apollo mill's ownership lineage: William Rogers

Table 1.1. Ownership History of the Apollo Rolling Mill, 1855–1902

1855–59	Kiskiminetas Iron Company Alex McClurg, John Kuhn, Washington McClintock, Alex Speer, James McFennemore, James and Teresa Crane. Mill built to produce nails and spikes
1859–63	Cass & McClintock George and Ellen Cass, Washington McClintock
1863–66	Rogers, Cass & McClintock William S. Rogers Sr., George and Ellen Cass, Washington McClintock. Introduction of sheet-iron production
1866–76	Rogers & Burchfield William S. Rogers Sr., Thomas Burchfield, Thomas Hoskinson. Introduction of tinplate production; experimentation with natural gas for fuel; firm builds Leechburg mill (sold in 1877)
1876–77	Rogers, Laufman & McElroy William S. Rogers Sr., Philip H. Laufman, Sarah McElroy
1877–83	Laufman & McElroy Philip H. Laufman, Sarah McElroy
1883–86	Volta Iron Company Philip H. Laufman, Sarah McElroy, J. J. Vandergrift Jr., Herman C. Mechling, James W. Bingham, Charles W. Batchelor, John Evans. Introduction of steel production, Laufman leaves in 1886 to start the Apollo Rolling Mill of P. H. Laufman & Co.
1886–99	Apollo Iron and Steel Company J. J. Vandergrift Sr., J. J. Vandergriff Jr., Charles W. Batchelor, James I. Buchanan, Douglas Buchanan, J. M. McQuiston, Otis H. Childs, George G. McMurtry (president). Firm builds Vandergrift mill and the model industrial town, 1895–97
1899–1901	American Sheet Steel Company (a Moore holding company) George G. McMurtry (president)
1901–2	American Tin Plate Co. (a U.S. Steel corporation subsidiary) Operated by American Sheet Steel Co., George G. McMurtry (president)
1902	U.S. Steel dismantles the Apollo mill for scrap

Sr. (1863–77), Philip H. Laufman (1876–86), and George G. McMurtry (1886–1901). Each experimented with the mill's product line, production technology, work regime, and workforce. In other words, they oversaw the industrial restructuring processes that occurred at Apollo and that typified developments within the entire nineteenth-century U.S. iron and steel industries.

When Kiskiminetas Iron built the Apollo mill in 1855, iron making was still a "disintegrated" process. Throughout the northeastern United States, inde-

pendently owned and operated firms, situated at separate locations, performed one or two steps in a larger production process. The first step, smelting, required material inputs of iron ore, limestone, and charcoal.

To produce one ton of pig iron at a typical Pennsylvania antebellum smelting operation, a gang of twenty-five laborers loaded three tons of ore, more than three hundred pounds of limestone, and nearly two hundred bushels of charcoal into a stone furnace, thirty feet high, called a "stack."[18] A waterwheel-driven wind bellows then blasted cold air into the ignited charcoal to raise the iron ore's temperature to between 500 to 1,000 degrees Fahrenheit. As the iron ore melted into a spongy mass, slag (impurities and extraneous material) adhered to the limestone, while the heavier iron settled at the stack's bottom. Workers periodically tapped the furnace at its base and hot iron poured out into a series of troughs that were dug into the sandy "casting floor." When the iron cooled, it was in the troughs' shape. Ironworkers referred to the rectangular metal ingots that resulted as "pig iron" because the configuration of the casting-floor troughs was like that of piglets suckling at their mother's teats. During the 1850s, the average output from such a furnace was about one thousand tons of pig iron per year.[19]

Several factors dictated the location of pig-iron production. Given the inadequacies of the transportation system, the bulkiness and large amounts of iron ore and limestone needed, the fragility of charcoal, and the amount of slag that was sloughed off during smelting, production had to occur close to places where natural resources were found—which meant at rural, if not remote, sites. By making iron there, furnace owners minimized transportation costs for raw materials. And since the pigs they produced weighed substantially less than the resources that went into making them, pig-iron ingots were cheaper to transport than raw materials; furnace owners thus had further encouragement to minimize the distance between their stacks and the raw materials.[20]

Given the usual rural locations of their stacks, furnace owners often imported workers from more populated areas. Given, too, that they needed such large supplies of raw materials, they frequently purchased extensive rural tracts on which wood for charcoal, iron ore, and limestone could be found. On these tracts they built furnace stacks and worker's housing. They also cultivated crops to feed workers, such tracts coming to be known as "iron plantations." Owners, such as Warren's James Biddle, were called ironmasters.[21]

After smelting, ironmasters sold the pig-iron ingots to nearby forges or foundries, where the material, either cold or slightly reheated, was hammered

or cast by blacksmiths and molders into hardware or farm implements. As at Kiskiminetas Iron's Apollo mill, however, residual impurities often made the pig iron too brittle for hammering or casting. To make it more durable, it had to go through another production step—purification, which entailed either high-pressure hammering or reheating.

During the reheating process—known as puddling—a skilled worker—a puddler—had his helpers melt several pig-iron ingots in a reverberatory furnace until the iron became liquified.[22] The puddler then stirred the material with a long iron rod (known as a rabble) as he brought the hot metal just to the boiling point, when impurities started to drain away. Moving the iron to a cooler spot in the furnace, he then kneaded the metal with long iron paddles as if it were dough. When he judged that the spongy material was ready, he separated it into balls, or blooms, weighing between 150 and 200 pounds. These balls were now "wrought iron." The puddler then instructed his helpers to remove them from the furnace, place them on hand-wheeled carts, and take them to the "squeezer"—a large press that compacted the metal and removed more impurities. If the puddler had improperly heated, kneaded, and purified the blooms, the squeezer would break them and they would have to be reworked in the puddling furnace. Blooms that made it through without breaking were sent to a "muck" rolling machine, where still more impurities were pressed out. Compacted into bars, the resulting material—muck iron—could more easily be worked by blacksmiths and molders without it's breaking. It was also more suitable for another production step—rolling—in which skilled "rollers" and their crews shaped the muck iron into various forms—wires, rods, rails, beams, plates, or sheets.

Before the Civil War, rolling usually entailed the use of a "two-high" rolling machine, which had rolls stacked like an old-fashioned laundry wringer. Before the muck bar's first pass through, the roller adjusted the spacing between the bottom and top roll. A crew of semiskilled workers (these included catchers, roughers, and matchers) used long tongs to guide the metal (sometimes it was "cold rolled," although it was much easier to shape the iron if it was hot). Because the rolls moved in one direction only, another semiskilled worker—the hook-up man, or hooker—used a hoist to lift the iron back over the top roll to be reinserted for the next pass. With each successive pass, the roller increased the pressure and flattened, smoothed, and elongated the iron into whatever shape the mill's owners had decided to make as their specialty—wires, rods plates, or whatever. If the iron was "hot rolled," several times during the rolling

process work had to stop as the roller sent it back to the "soaking pit" furnaces for reheating by skilled workers known as heaters.[23]

Ironmasters usually built their furnace stacks in rural areas. Foundries and forges could be located almost any place where there was a demand for the products they fashioned. But puddling works and rolling mills nearly always had an urban situation. Puddling furnaces, rolling machinery, and other pieces of equipment represented substantial capital investments that needed to produce continually to pay off the debt. Moreover, operating costs increased if furnaces cooled off and had to be reheated. Therefore, mills and puddling works required several shifts of workers that only an urban labor market could easily supply. They also demanded a lot of fuel and pig-iron inputs and were best served at central locations in the transportation network—which usually were urban. In addition, finished products could be more easily dispatched from towns and cities. Thus, Kiskiminetas Iron located its mill close to Apollo to capitalize on its twin urban advantages: population concentration and geographical proximity to the Pennsylvania Canal, coal, and iron resources (see fig. 2.7).[24]

To stay profitable in Apollo or any urban location, mill owners continually made adjustments—experimenting with new product lines, new technologies, and new workforce configurations. As changes occurred—in demand for iron products and in the organization of the larger industry, in the spatial layout of the transportation network and the availability of natural resources, and in the nature of the workforce—iron makers responded by taking their mills through an industrial restructuring process. They had to do this if they were to compete successfully and survive in an industry that by the 1860s consisted of hundreds of small firms like Kiskiminetas Iron and its successor Cass & McClintock.

The Product Life Cycle and Experiments in Tinplate Making

Between 1860 and 1863, George Cass and Washington McClintock found it difficult to maintain the Apollo mill's profitability. Cass & McClintock had learned (bettering their predecessor, Kiskiminetas Iron) to produce good quality nails and spikes. The firm closed, however, when most of their workforce joined the Union Army during the Civil War, not reopening until late in 1863, with an additional partner, British iron maker William Rogers Sr. Born in 1827 and raised in Wolverhampton, England, Rogers grew up in one of the major centers of the British iron industry. By the time he emigrated to the United States

at age thirty, he had worked his way up the iron-making occupational hierarchy from unskilled puddler's helper to skilled puddler, sheet roller, machinist, and then to mill manager. Immediately before arriving in Apollo at age thirty-six in 1863, he built and ran a sheet-iron mill for Everson & Preston (Pennsylvania Iron) in Pittsburgh.[25]

The changes that Rogers instigated at the Apollo mill after 1863 amounted to experimentation and to an early round of industrial restructuring. His first task involved switching the company's product line from nails and spikes to blue and planished iron sheets. This, of course, required Rogers to modify the mill and its workforce. He installed two sheet-rolling machines and several additional puddling furnaces and hired more workers, including his son, a roller, William Rogers Jr.

For the first two years that Rogers made sheets at Apollo, muck iron and coal arrived in the town as it had always done—by teamster and on boats that still plied the Kiskiminetas Valley remnant of the Pennsylvania Canal. When the Western Pennsylvania Rail Road built its Kiskiminetas Valley line along the riverbank opposite Apollo in 1865, however, Rogers came to rely solely on teamsters and rail transportation. Teamsters made a short trip across the Kiskiminetas toll bridge in downtown Apollo to meet passing freight trains at the village of Paulton.[26]

In 1866, Rogers formed a partnership with two Allegheny City (Pittsburgh) residents—Thomas Burchfield and Thomas Hoskinson—to lease the Apollo mill from Cass & McClintock. According to the articles of incorporation filed at the Armstrong County courthouse in Kittanning, Hoskinson was a silent partner whose association with the firm amounted to supplying the company with $7,500 in cash; Burchfield held responsibility for directing the company's business matters in Pittsburgh; Rogers oversaw production at the Apollo mill.[27] With Hoskinson's capital in hand, Rogers instigated some the most abrupt and radical industrial changes that Kiskiminetas Valley would see until the mid-1880s. He started by breaking ground on a second rolling mill six miles downriver from Apollo, in Leechburg, a town with no previous direct connection to iron manufacturing. Within ninety days, the new mill was producing sheet iron and a new product, tinplate. This tinplate was not a plate made of solid tin: it was technically "tinned iron," a product that proved to be more rust resistant than regular iron and more durable than pure tin.

To understand why Rogers expanded the company's holdings to Leechburg and the product line to tinplate, two things need to be considered: first, Rogers's

participation in a process that business analysts now call the product life cycle; and second, the changing geography of natural resources and transportation in the Kiskiminetas Valley.[28]

At the beginning of the product life cycle, a single firm (or group of firms) experiments with the production of a new item. In the case of tinplate, the pioneering firms that broke into the market at a large scale were in Britain, although the technology and knowledge necessary to make this product had come to Britain from mainland Europe only in the mid-eighteenth century. By the 1850s, however, British tinplate makers had perfected their own manufacturing methods. After rolling iron plates or sheets, tinplate makers boiled them in a bath of molten tin until the tin amalgamated with the iron. As the metal cooled, workers dipped them back in a tin broth several additional times to make sure that they had an even veneer. After the final dipping, they painted the sheets with tallow or palm oil to prevent oxidization during cooling. The British and Americans used this product for making roofing, food-storage boxes, boilers, and (later) containers for various liquids.[29]

To return for a moment to the product life cycle in general, we may note that during the initial experimentation phase, the pioneering firm (or group of firms) monopolizes the market for that product. In the case of tinplate, before the American Civil War, the British had achieved such efficiency that they could always offer lower tinplate prices in the American market; moreover, U.S. legislation helped them maintain their dominance. Through the 1861 Morrill Tariff Law, the U.S. Congress allowed the federal government to levee a 10 percent ad valorem protective duty on imported tinplate as a way to encourage domestic production. This duty, however, proved to be ineffective at keeping British products out of the U.S. market. And until the early 1890s, British manufacturers and their American sales agents effectively convinced Congress to keep it that way. They argued that any change in the law would inflate tin costs so much that American buyers who wanted to make tinplated cans, drums, roofing, and siding would be adversely affected. In such a business climate, American iron producers could not even think about going into tinplate production.[30]

The product life cycle predicts, however, that—if conditions allow—other firms will try to compete against the pioneering/monopolizing firm or group of firms. The American Civil War opened a very narrow window of opportunity, during which economic conditions changed within the tinplate industry. In 1862, the U.S. government implemented an emergency tariff of 25 percent ad valorem on foreign tinplate in an effort to raise money for an overburdened fed-

eral treasury. The tariff hovered around 20 percent through 1875, thus giving three American manufacturers thirteen protected years in which to become established in the tinplate industry—the United States Iron and Tin Plate Manufacturing Company in Demmler (near McKeesport in southwestern Pennsylvania's Monongahela Valley), the American Tin Plate Company in Wellsville, Ohio, and Rogers & Burchfield at Apollo and Leechburg in the Kiskiminetas Valley.[31]

Rogers competed within this new industrial climate by pursuing two basic strategies: first, he began offering buyers a different kind of product. Britain's exports to the United States did not necessarily meet the specific needs of individual American buyers so Rogers specialized in making small batches of tinplate to order. Working through an agent, New York City's Phelps Dodge & Company, Rogers regularly received special orders for tinplate from a St. Louis, Missouri, stamping company that made enameled flatware and tea trays. Within the product life-cycle idea, this strategy is known as product innovation.[32] Second, he tried to offer buyers a cheaper product through changes in production technology, a strategy known as process innovation.

Before Rogers could innovate to make special kinds of tinplate, however, he had to be able to make basic tinplate. Between 1870 and 1874, Rogers & Burchfield added bathing and dipping facilities to the Apollo mill and built similar facilities at Leechburg. At Leechburg, the company constructed puddling furnaces and erected several rolling machines. For both mills, Rogers secured the U.S. patents for the latest Russian sheet-rolling and tinning equipment and techniques. Given that southwestern Pennsylvania ironworkers had no experience in making tin, Rogers also hired a skilled workforce of puddlers, rollers, heaters, and tinners from Monmouthshire, Wales, and Rogers's Midlands hometown of Wolverhampton.[33] According to the 1880 U.S. federal census population manuscripts, more than 80 percent of the skilled rollers and puddlers in the Apollo and Leechburg workforce listed either England or Wales as their place of birth.

Rogers made one major process innovation: he experimented with natural gas to heat furnaces and boilers at Leechburg. Nearly the entire Kiskiminetas Valley is underlain by, in addition to substrata deposits of salt and bituminous coal, Upper Devonian Age rocks that hold shallow reservoirs of natural gas. As had been the case in 1859 when Edwin Drake successfully drilled for crude oil at Titusville, one county north from Apollo, the early Kiskiminetas Valley "gas producers" needed to figure out the range of uses to which natural gas could be put. Rogers first used coal to heat the furnaces, but

> in 1874 gas was substituted with success, the first use of this clean fuel in the United States. The wells were just across the Kiskiminetas river, and had been drilled by Major (Joseph G.) Beale in 1869. A line of pipe was run across the river and under the boilers, the pressure being reduced by a crude regulator devised for the occasion, and the gas was lit by John Cole, the superintendent, who used a long pole with a torch on the end, fearing an explosion. . . . The gas is much cheaper than coal, and being free from sulphur makes a better quality of iron than can be made with bituminous coal.[34]

Rogers immediately patented the company's method for using natural gas for industrial purposes and had similar gas wells dug at Apollo. In an era when northwestern Pennsylvania oil producers were only starting to pioneer the use of pipelines, Apollo and Leechburg's geographical proximity to ample reserves of cheap, clean natural gas enhanced their profitability as production sites.

The railroad's arrival in 1865 also enhanced the profitability of the two mills. Here, the town of Leechburg acquired something of an edge. At Apollo, the Western Pennsylvania Railroad built the Kiskiminetas Valley line on the Westmoreland County side of the river, opposite the town and mill. But at Leechburg, the WPRR brought the railroad all the way across the river into town. This is probably another reason why Rogers established a mill in Leechburg. At Apollo, gangs of teamsters had to haul raw materials, iron sheets, and tinplate over a toll bridge before they could be loaded on to railcars; at Leechburg, as soon as a siding was built off the mainline into the mill, railcars could be loaded and unloaded right in Rogers & Burchfield's yard.

Within the product life cycle, any firm that successfully enters into a preexisting market and introduces a new product becomes a pioneering/monopolizing firm for that product. Then the product life cycle starts anew. The business literature suggests, however, that many firms fail after breaking into a monopolized market—especially if they overextend their capital resources through simultaneous product and process innovation. They are even more vulnerable during dramatic downturns in the larger economy like the Panic of 1873. Rogers & Burchfield had built the Leechburg mill from scratch in 1872—a facility that was capitalized at $225,000. They also took out a $15,000 mortgage to buy the remaining interest in the Apollo mill held by George and Ellen Cass and Washington McClintock, probably unaware that they were putting their firm at risk. For one thing, Rogers had confidence in his decision-making ability regarding iron making; he had never failed in any business or manufacturing endeavor in

which he had been involved. Like hundreds of other U.S. manufacturers, he and Burchfield simply took advantage of tariff-law changes as well as the new accessibility patterns that had been created during a frenzied burst of post–Civil War railroad building. Banks and investment houses willingly made credit available to him on easy terms to buy land, natural resources, and production equipment.

Late in 1873, one of the nation's largest investment houses, Jay Cooke & Company, failed, sparking a nationwide financial panic. Banks closed, creditors called in their loans, and many manufacturing companies could not stay in production. Moreover, in 1875, the U.S. government dropped the tinplate tariff down to an insignificant 1.1 cents per pound. British tinplate flooded back into the U.S. market. After 1875, tin exports from Britain surged by 140 percent to more than 330,000 tons in 1885.[35]

Rogers & Burchfield managed to survive the initial financial panic but could not withstand the impacts of the change in tariff. The firm declared bankruptcy in the U.S. District Court for the Western District of Pennsylvania in October 1876. Rogers hung on to the Apollo mill by forming a partnership with yet two more Pittsburgh residents, Philip H. Laufman and Sarah B. McElroy. This company, Rogers, Laufman & McElroy, paid off Rogers & Burchfield's $15,000 mortgage. The Leechburg mill, however, had to close. At an auction held in May 1877, the Armstrong County sheriff sold it for $75,800, 30 percent of its 1872 capitalized value. The buyer, established Pittsburgh ironmaster J. C. Kirkpatrick, had found a real bargain.[36]

A local historian who assessed the impact of the Panic of 1873, the ensuing depression, and the Leechburg mill's temporary closure wrote:

> This failure of their chief source of income almost paralyzed the inhabitants of the town, which had just taken a new lease of life and grown from a village of 350 souls to a bustling trade center of 1,500. . . . Some of the skilled workmen went to the newly established mills at McKeesport, for Leechburg had been the first plant in the United States to make tin. Others went back to the coal mines which they had left for the seemingly more desirable work in the mills; and many returned to their farms or hired out as laborers. Most of the workmen were from England and Wales, and had never known other than the iron or tin trade, and to these strangers in a strange land the situation was dark indeed.[37]

This bleak portrait emphasizes the population growth and economic reorientation from agriculture to industry that occurred in the Kiskiminetas Valley during Rogers's experiments in sheet iron and tinplate production. It also describes

the mobility of labor during this particularly severe depression. Local farmers, coal miners, and skilled British ironworkers had moved to Leechburg and Apollo to work in the mills during the boom of the late 1860s and early 1870s; during the depression of the mid-1870s, however, they had to go elsewhere to find work. Or they retreated to their rural origins. Skilled Welsh puddler John Benjamin, for instance, left Leechburg after the Panic to go to an ironworks in Tennessee. Apollo heater John M. Fiscus, a local farmer's son, moved his wife and family to Pittsburgh where he became a roller in the mill of Moorhead, McClene & Co. Ultimately, iron maker William Rogers, a staunch Baptist who had organized Apollo's First Baptist Church in 1868, saw his congregation weakened when some of the Welsh and English workers left town. Many ironworkers remained in Apollo and Leechburg, however, and waited to see what would happen to the mills.[38]

Rogers's Apollo-focused partnership with Laufman and McElroy lasted for only one more year. In December 1877, Laufman and McElroy released Rogers from any responsibility for debts that the Rogers, Laufman & McElroy firm may have incurred, paid him $1,500 for his services, and promised that another $1,000 payment would be coming in four months. The reasons for the making of this arrangement are not recorded. Rogers's obituary (1901) suggests that he left the Kiskiminetas Valley demoralized:

> With the financial reverses of the firm naturally came the breaking to an extent of his strong spirit. His patents on the use of natural gas had been assailed, as others also had strong claims, it cost him a legal battle, which lasted for several years. The mills having been sold, his patents on planished iron and several other valuable patents on the manufacture of iron ware also eventually sold at an assigns sale at Reuben Miller, Jr.'s office on Wood street, Pittsburgh. W. D. Wood bought the planished iron patents, which with what he already had, was a valuable acquisition. Kirkpatrick, Bell [*sic*] & Co. [Kirkpatrick, Beale & Co.] bought some of the others, which were really almost a part of the mill which they had previously bought, so that the legal title passed and the work of years was gone.

Rogers moved to Boston and seems to have skipped from one iron firm to the next.[39]

Despite Rogers's financial failure, the impact of his accomplishments at Leechburg and Apollo during the 1860s and 1870s cannot be underestimated. In response to changes in tin tariffs and the growing U.S. demand for tinplate and tinned sheets for roofing and siding, boilers, drums, biscuit (cookie) tins,

cans, and kitchen utensils, Rogers had transformed the small, problem-ridden, and locally oriented Apollo mill into the producer of Apollo's Best, a nationally recognized brand of blue sheets and plates. At Leechburg he built a mill where he pioneered the industrial use of natural gas. Moreover, Rogers's hiring of skilled British workforces at both mills caused new social relations to emerge in the Kiskiminetas Valley. By 1880, these ironworkers had developed a mill culture that had formal connections to national labor unions. They created the social context in which Rogers's successors—Philip Laufman and George McMurtry—operated during the 1880s and 1890s as they transformed the Apollo mill from an iron and tinplate maker into a major producer of galvanized sheet steel.[40]

Life and Labor in Laufman's Apollo Rolling Mill

Like William Rogers, Philip Harrington Laufman had a long-time association with the iron industry. During the 1820s, Laufman's father, David, was an ironmaster on an iron plantation near Chambersburg, Pennsylvania. Given that young boys commonly helped around antebellum furnaces, forges, and rolls, twelve-year-old Philip had undoubtedly acquired some practical knowledge of iron making before his father's death in 1834. We do not know whether or not Philip Laufman stayed to work at the furnace, but given the number of highly specialized metallurgical techniques he is said to have invented, he probably acquired a more advanced knowledge of iron making before moving to Pittsburgh during his later teens. After becoming William Rogers's partner in 1876, however, Laufman attended to financial matters related to the Apollo iron firm from Pittsburgh and sent his son Wilmer to Apollo to oversee production.[41]

During Laufman's and Sarah McElroy's ownership of the mill, their company expanded the existing facility by installing four additional heating furnaces, two more annealing furnaces, and eight extra sets of rolls. Even with these gains, the Apollo mill was small compared with other plants in the industry. For example, based on the 1879 figures for Pittsburgh, the average rolling mill had approximately thirty puddling furnaces and 220 workers; Apollo had only nine puddling furnaces and approximately 140 workers.[42]

Little information exists regarding Laufman & McElroy's management practices and relationship with workers at Apollo until Laufman and McElroy became members of the Volta Iron Company in 1883. Based on the available primary evidence and what is generally known about the iron and steel industries

during this period, it is still possible to make four speculative points about the company's management practices and labor relations in the Apollo mill.[43] First, the mill probably operated two ten-hour "turns" or "stints" (shifts) per day. This system existed in many mills in and around Pittsburgh during the late 1870s and early 1880s. The 1880 U.S. federal manuscript census of population records seventeen puddlers in Apollo and adjacent Kiskiminetas Township, one employee shy of the number needed to work two daily turns at the mill's nine puddling furnaces. (More puddlers may have resided in Washington Township, where the census enumerator resorted to classifying all rolling-mill employees who were not unskilled laborers as "works at rolling mill.")

Second, Laufman & McElroy probably paid their rollers and puddlers a set tonnage wage instead of an hourly wage. This pay system was nearly universal in southwestern Pennsylvania iron mills. It existed because owners knew how physically grueling puddling and rolling were. The excessive temperatures in which workers toiled and the amount of heavy lifting they had to perform made workers "old at 40."[44] To maintain their stamina, puddlers and rollers needed to rest between each heat. An hourly wage, however, might have encouraged the expansion of these rest periods and led to a decrease in output. Mill owners had to allow puddlers and rollers to take breaks during their turns, but a tonnage rate would act as an incentive to maintain a steady pace of production.

Third, although the tonnage rate encouraged production, Laufman & McElroy's puddlers probably decided what the actual pace of production would be. This was a cardinal rule in nineteenth-century iron mills: puddlers simply could not be rushed. If they hurried, they would not properly stir and knead the iron in their furnaces, the iron would break under the squeezer's pressure, and they would have to do their work over again. Understandably, for puddlers this was a situation to avoid because they were not paid for broken iron as part of the tonnage they produced. Furthermore, if the pig iron being puddled contained a lot of impurities, the puddling process could take even longer. As a consequence, the first puddlers' union, the Sons of Vulcan, decided in the 1860s that a good pace for any puddler to maintain under the tonnage system was about five heats per ten-hour turn. This pace remained the standard throughout the rest of the nineteenth century. It also determined the rate at which others worked. Skilled rollers sat idle until the blooms came out of the squeezer. While puddlers rested before their next heat, rollers were usually hard at work.

Because mill owners found it impossible to mechanize the puddling process (although they experimented with mechanical rabble rods) and puddlers could

not physically step up the pace of production or amount produced, the only way that rolling mills could increase output was to purchase already puddled muck bars from other producers or to install additional puddling furnaces. Laufman & McElroy did the latter.

Fourth, over the years, a mill culture developed throughout southwestern Pennsylvania whereby puddlers and rollers had absolute autonomy in hiring helpers, matchers, catchers, roughers, and other workers who labored around the furnaces and rolls. In turn, puddlers and rollers paid the wages of these supporting workers out of the tonnage rate that the mill owner paid them. There were practical reasons why this subcontracting system existed. Puddling and rolling involved lifting and working in hot conditions, and the puddlers and rollers simply could not perform their jobs by themselves: they not only needed large supporting crews, but there had to be complete coordination and trust between the puddler or roller and his crew or the result could be wasted time and materials, damaged equipment, and worker injury. Puddlers and rollers thus found it important to hire individuals whom they knew and trusted. Puddlers and rollers sometimes chose family members to work with them, thus keeping more of the tonnage wage in the household. Under this system, the "secrets of the trade" could also be kept within families, passed down from father to son. According to the 1880 census, four Apollo puddlers had employed children living at home with them, and all four had sons who worked as puddler's helpers or held semiskilled jobs related to the puddling process. Gradually, many of these puddlers and rollers enjoyed so much autonomy in the workplace that they came to consider themselves as independent businessmen—separate from the iron-making firms that paid them. This was the case for several Apollo rollers who listed themselves in the business directory that accompanied the 1879 Pomeroy atlas for Armstrong County.[45]

In mills like Apollo where arrangements of this type existed, puddlers and rollers created a "craftsman's empire"; they even referred to themselves as being members of an "aristocracy of labor." Due to the addition of extra puddling furnaces and rolling machines, however, working for them was a burgeoning workforce of semiskilled and unskilled workers. Labor historian David Montgomery estimates that in the 1870s between 10 and 20 percent of the iron-making workforce were laborers; in the 1890s, this segment had increased to 40 percent.[46]

In chapter 2 we will see how iron manufacturers repeatedly used unskilled and semiskilled workers in ways intended to topple the craftsman's empire. For this reason, it is important to know something about the "lower" laboring end

of the occupational hierarchy (as well as something about their rural laboring counterparts). The following discussion uses the U.S. federal manuscript census of 1880—the census year immediately prior to the introduction of steel production at Apollo—as a baseline, although it is difficult to disaggregate the iron-making workforce from the rest of the employed population in Apollo in 1880 due to classification problems in the census. Perhaps as many as 45 percent of the Apollo mill's workforce performed jobs that made them classifiable as laborers.[47] Most were Pennsylvanian by birth. This contrasted directly with the puddlers and rollers—more than 80 percent of whom were born in either England or Wales.

Great variation existed within the category of laborers in terms of age and household structure. In Apollo, laborers fell into three groups. The first group, about 30 percent of all laborers, consisted of young men (in their late teens and early twenties) who lived at home with their parents in nuclear-family households—Apollo's prevailing household structure at the time.[48] Typically, the young laborer, another sibling, and their father supported the remaining members of the household, which on average numbered six people. The second group (slightly more than half of all laborers) headed households in the early stages of family formation. Typically, their households consisted of four people—the laborer, his wife, and two young children. Finally, about 20 percent of the laborers were older (in their late forties or older); most had undoubtedly held other iron-working positions in their youth but were so physically spent that they could not continue in their skilled positions. Others may have taken unskilled positions after being injured in their former skilled occupations. Still needing to support themselves and their families, they took jobs as day laborers. Their households typically consisted of seven individuals: the laborer, his wife, and five children, two of whom worked outside the home. Thus, unskilled mill positions were filled by older Apollo men, the mildly incapacitated, and the young. However, most men between the ages of twenty-five and forty-five worked in non-laborer occupations.

Although many of the younger laborers originally hailed from the surrounding Kiskiminetas Valley countryside, the iron industry's impact on the rural townships cannot easily be seen in the 1880 census (table 1.2). Most household heads still farmed, assisted by a large number of farm laborers (usually, their sons). In Parks Township, near Apollo, each farmer-headed household had, on average, one son at home working as a farm laborer in 1880. From contemporary published biographical accounts, we nevertheless know that some farm boys

Table 1.2. Occupational Structure, Kiskiminetas Valley, 1880

Occupation	Apollo %	Leechburg %	Kiskiminetas Township %	Gilpin Township %
Managers[1]	16	14	4	5
Farm	4	6	66	60
Service[2]	12	9	3	5
Craftsworkers	18	22	7	6
Operatives	20	26	8	14
Laborers	30	24	13	10
Total number employed	340	334	495	420

Occupation	Parks Township %	Allegheny Township %	Bell Township %	Washington Township %
Managers[1]	2	5	3	4
Farm	87	50	52	81
Service[2]	4	5	4	1
Craftsworkers	4	6	2	6
Operatives	1	16	11	3
Laborers	2	17	30	10
Total number employed	238	581	348	515

1. Includes officials, proprietors, and professionals.
2. Includes clerical, sales, and service workers.

Source: U.S. Department of Commerce, Bureau of the Census, *Tenth Census, 1880: Population Manuscripts*, Pennsylvania, Armstrong County, Westmoreland County.

had traditionally taken jobs off the farm and perhaps out of the Kiskiminetas Valley altogether throughout the nineteenth century. For example, Henry J. Alms (born in 1820 on a farm in Bell Township) as a teenager worked in the local coal mines, became a boatman on the Allegheny River for three years, and then learned to be a blacksmith. At the age of thirty-nine he purchased a seventy-acre farm near Maysville, where he split his time between farming and blacksmithing. Daniel Shaner's early life history was similar. Shaner left the family farm in Allegheny Township in 1854 at age twenty-one to work on a farm in Indiana, after which he moved to Kansas to work in a sawmill for two years. In 1860, he bought a fifty-seven-acre farm in Gilpin Township. Thus, some former farm boys eventually went back to farming. Nevertheless, there were a number who

decided to work in the local iron mills or who moved off the farm permanently. Levi Stitt, for instance, was born into a Parks Township farm family in 1860. At age twenty-two he moved into Apollo to work as a carpenter for Philip Laufman. Over the next fifteen years, the firm promoted him to millwright and then master mechanic. When Apollo Iron and Steel put lots on sale in Vandergrift in 1896, Stitt was one of the first to buy.[49]

The local teenage farm boys came to play a crucial role in the Kiskiminetas Valley iron industry. They made up the majority of Laufman & McElroy's unskilled labor. By the 1890s, however, with the advent of the steel industry, they fulfilled a different and even more important purpose. In 1893, Laufman & McElroy's successor—Apollo Iron and Steel—successfully experimented at hiring more of them, their farmer fathers, as well as rural coal miners, for unskilled and semiskilled mill positions that had recently been vacated as the company hastily trained and promoted its pre-existing nonunionized laborers into the ranks of highly skilled workers. This newly reconfigured workforce became the pool from which Apollo Iron and Steel handpicked the original Vandergrift workforce and resident population. Members of the old self-proclaimed aristocracy of labor were deliberately excluded. To see why it was the new steelworkers, not the old ironworkers, who made the trek to McMurtry's new town in 1896 we need to understand the difficulties that the town of Apollo had during the late 1880s and early 1890s in adapting to industrial restructuring's next major phase.

CHAPTER TWO

Apollo's Uneasy Transition from Iron to Steel

"A canal town of the past, a railway town of the present, Apollo is destined to become an iron city in the future."[1] This somewhat odd prognostication from an 1891 "cyclopedic" description of the Kiskiminetas Valley points out the danger in treating secondary archival material as historical fact. In 1891, steel, not iron, had already been the order of Apollo's day for nearly a decade. Beginning in the early 1880s, new investors had entered Philip Laufman's firm and transformed the Apollo mill yet again, this time into a major producer of steel sheets. They ripped out old iron-making equipment to make way for giant furnaces for making steel and faster rolling equipment, added even more unskilled and semiskilled workers to the payroll, and changed the company's name in 1886 from the Volta Iron Company to Apollo Iron and Steel to advertise the latest product shift.

This transition from iron to steel progressed fairly smoothly throughout the 1880s. In the early 1890s, however, Apollo Iron and Steel's corporate goals started to conflict with the needs and aspirations of Apollo's residents. The steel company desperately wanted to buy land adjacent to the mill for expansion, but surrounding property owners refused to sell. Tensions also emerged between the

rapidly changing steel company and its tradition-bound unionized ironworkers over hiring practices, production techniques, and wage rates. In 1893, the tensions erupted into a full-fledged, two-year labor dispute. Unable to expand their plant and wanting to be rid of the union forever, Apollo Iron and Steel's investors began to make plans to abandon Apollo. A canal town of the past and now an iron town of the past as well, by the mid 1890s Apollo faced a very uncertain future, even as a steel town.

Major Players in the Transition

In 1883, seven years after Laufman & McElroy assumed ownership of the Apollo mill from William Rogers, the U.S. economy entered yet another recession. Even though the downturn was nowhere near as severe as the one that had followed the 1873 Panic, some manufacturers ceased operation, waiting for conditions to improve. Many others saw their facilities seized to pay creditors. A few, however, capitalized on their competitors' misfortune, acquiring at auction (and at bargain prices) the machinery, natural resources, and property belonging to bankrupt firms. Manufacturers thus used depressed economic conditions to put the bulwark in place to gain a greater market share and make more profits once the economy rebounded. But doing this often required new investors and infusions of capital.

At the beginning of the 1883 downturn, Philip Laufman and Sarah McElroy reorganized their Apollo iron firm. The historical record is silent regarding the motive: the firm may have been in financial trouble or it may simply have needed an infusion of capital to add more equipment to the Apollo mill. Whatever the reason, Laufman and McElroy became partners with several new investors and the company was renamed Volta Iron.

Capitalized at $300,000, ownership of Volta Iron was divided into 3,000 shares, each worth $100. Laufman and McElroy each owned 525 shares. The remaining shares were split between five investors from Pittsburgh: Herman Mechling (500 shares), John Evans (483 shares), James Bingham (483 shares), Charles Batchelor (242 shares), and Jacob Jay Vandergrift Jr. (242 shares).[2] Of Evans, little is known: he is untraceable through the federal manuscript census and published biographical sources. He may have been a puddler in Allegheny City in 1880, but even if so his connection with the other investors in 1883 is unclear.[3] The others were all related to Pittsburgh oilman Jacob Jay Vandergrift Sr.: Mechling and Bingham were married to Vandergrift's daughters Helen and

Kate; Batchelor was married to Vandergrift's cousin; and J. J. Jr. was J. J. Sr.'s son. Apart from Philip Laufman (and possibly Evans), none of the investors in Volta Iron had lifelong associations with the iron industry. Instead, most of the capital they brought to the firm had been earned in other lines of business—steamboat shipping, pipelines, oil refining, and real estate. By 1886 their investment in iron making proved to be so profitable (or was it that the firm was in such trouble?) that the Vandergrift family patriarch, J. J. Sr., became the principal stockholder. This Vandergrift, if compared with all previous investors in the Apollo iron industry, was a megacapitalist. The possessor of a unique résumé of business experience for southwestern Pennsylvania, he would finance the company and Apollo's transition from iron to steel.

Jacob Jay Vandergrift Sr.

Born at Perrysville near Pittsburgh in 1827, J. J. Vandergrift Sr. (fig. 2.1) grew up on Pittsburgh's South Side.[4] At the time, "Pittsburgh was already a smokey industrial city of the steamboat era at the hub of commerce going upstream as well as down."[5] Stimulated by visits to his uncle John's steamboat-building works on the Monongahela riverfront, Vandergrift decided at age fifteen to leave public school to become a cabin boy on the steamboat *Bridgeport*. For the next decade he served as deckhand, mate, captain, and then pilot on a variety of steamers and towboats that ran between Pittsburgh and St. Louis.

In 1858, Vandergrift acquired part ownership in two steamers that towed coal from Pittsburgh to New Orleans. Two years later (the year after Edwin Drake successfully drilled for oil at Titusville, Pennsylvania), Vandergrift left the operation of his steamboats to his Pittsburgh-based partners and headed off to stake a claim in the newly opened West Virginia oil field. Within a year, he was back in Pittsburgh, his wells having been seized by the Confederate Army. Vandergrift's second attempt to enter the oil industry—this time in northwestern Pennsylvania's booming "oil region"—met with far greater success (fig. 2.2). At the time, the Pennsylvania oil region was much like the California gold fields a decade earlier: rough, rowdy, and bustling with activity.

In November 1861, Vandergrift hauled four thousand empty oil drums up the Allegheny River for delivery to various oil producers around Oil City. While there, he purchased five thousand barrels of crude oil to deliver to Pittsburgh refiners the following July. Vandergrift planned to transport this oil down the Allegheny River using the conventional method: his steamboat would push barges loaded with oil-filled barrels. But during the winter of 1861–62, Vandergrift

Fig. 2.1. Jacob Jay Vandergrift Sr. (Photo from the Pittsburgh Photographic Library Collection, reprinted courtesy of the Carnegie Library of Pittsburgh.)

learned that another firm had successfully transported oil in bulk in a barge hull. Convinced that this would be a cheaper way to get his crude to market (rather than buying 5,000 wooden barrels), Vandergrift commissioned a friend to build twelve "bulk boats" at the cost of two hundred dollars each. Each bulk boat carried four hundred barrels' worth of crude. In one season, the oil Vandergrift carried on these barges more than paid for his expenses. Thus began a lucrative business that made Vandergrift rich. On a single trip, "oil purchased at point of production in 1863 at one dollar per barrel, was sold a little later in the same year at Pittsburgh for twelve dollars per barrel, at a profit of seventy thousand dollars."[6]

Vandergrift moved to Oil City in 1863. Soon afterward, he turned his atten-

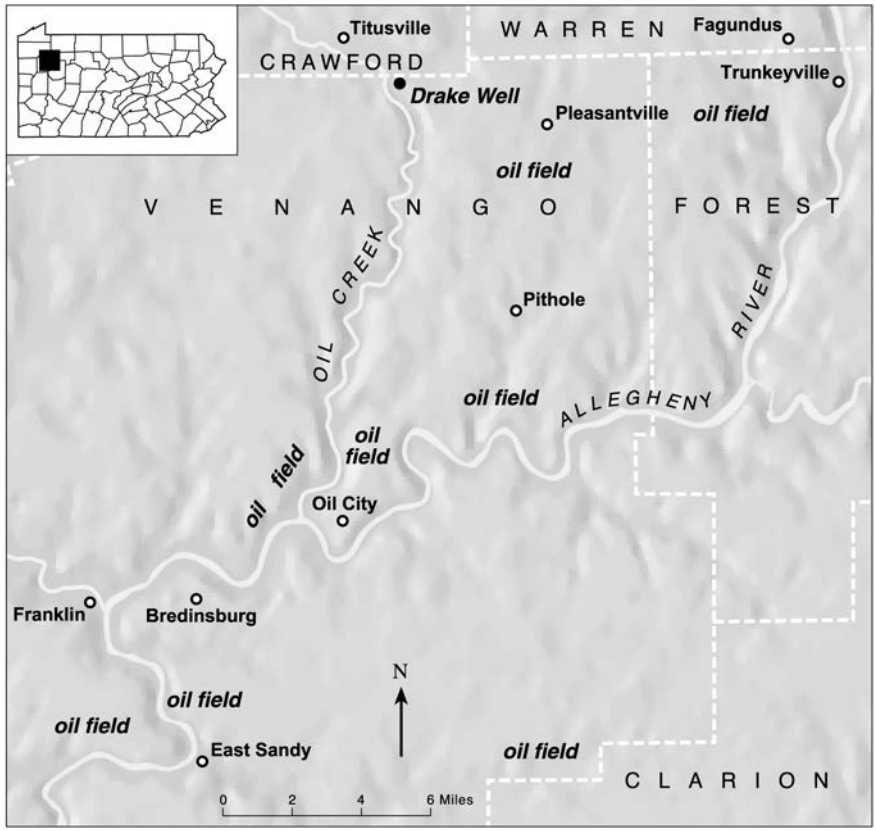

Fig. 2.2. Map of oil region of Northwestern Pennsylvania. In the late 1860s, J. J. Vandergrift Sr. built a large refinery at Oil City fed by several small pipelines. Extending from Pithole to West Pithole, Fugundas to Trunkeyville, East Sandy to Oil City, and Bredinsburg to Oil City, the pipelines became the underpinnings to the United Pipe Lines of Vandergrift, Forman and Company and were critical to John D. Rockefeller Sr.'s plans to control oil production in the region.

tion toward solving one of the more dire problems that oil producers faced: transporting oil from the wells to the refinery. At the time, oil producers relied primarily upon independent teamsters to haul barrels of oil over muddy roads in wagons. These teamsters often charged exorbitant cartage rates: figuratively, and almost literally, they had producers over a barrel. If teamsters did not like the rates producers wanted to pay, they refused to work.

Given the transportation difficulties, many oil refiners (who were usually not

the same people as the oil producers) built refineries close to the wells in boomtowns such as Oil City, Pithole, and Titusville. However, refined products such as kerosene and lubricating oil were just as difficult to transport as crude. Therefore, unlike the iron industry with its big weight differential between resource and product, there was a weaker incentive for refiners to locate near their source of supply. Some firms ended up siting their refineries closer to the market and to major transportation arteries—principally the Ohio River and the Great Lakes—in cities such as Pittsburgh and Cleveland.

"Captain" Vandergrift's experience in the riverboat trade put him at an advantage to solve the transportation problem. He had the financial resources to hire his own gang of teamsters, but the amount these teamsters could carry was insufficient to supply the oil refinery he had just built at Oil City, which required two thousand barrels per day.[7] Thus Vandergrift began experimenting with the construction of short pipelines that would ensure a constant, large supply of oil. The earliest pipelines extended from Pithole to West Pithole, from Fugundas to Trunkeyville on the Allegheny, from East Sandy to Oil City, and from Bredinsburg to Oil City. They became the underpinnings to Vandergrift's transportation firm, the United Pipe Lines of Vandergrift, Forman & Co.

Within five years, Vandergrift owned and operated facilities in nearly every aspect of the oil industry: resource acquisition (drilling/production), resource processing (refining), and transportation (pipelines). The only area he had not yet entered was the manufacture of the tubes and pipes needed to drill wells and to transport oil. Few others had so successfully integrated several aspects of production as—a fact that made Vandergrift important to Cleveland refinery titan John D. Rockefeller when Rockefeller set out to gain control of the northwestern Pennsylvania oil region in 1871.[8]

Like many refiners, Vandergrift initially objected to Rockefeller's presence in the oil region. Vandergrift had worked hard to build up his part of the industry and he did not want to relinquish control. Realizing, however, that Rockefeller was in the midst of striking a preferential transportation deal with the railroads that might bring Pennsylvania's oilmen to their knees, in 1872 Vandergrift handed over autonomous control of his pipelines and refinery (and, presumably, his wells) to Rockefeller in exchange for the vice presidency of the new National Refiners Association and a large amount of Standard Oil stock. Rockefeller would be the president. For the next decade, then, Vandergrift was one of Rockefeller's closest business associates, joining the likes of John D. Archbold, Charles Pratt, Henry H. Rogers, and Henry Flagler.[9]

Standard Oil effectively controlled refining, transportation, and hence crude-oil production in the Pennsylvania oil region by the end of the decade. Standard Oil's "associates" received not only rate reductions from the railroads, but Rockefeller also coerced the railroads into giving Standard Oil a rebate on any oil that the railroads hauled for Standard Oil's competitors. As if that were not enough, Standard-friendly railroads refused to haul oil of some Standard-hostile firms or to allow non-Standard pipelines and railroads to cross their rights-of-way.

Independent producers, refiners, and transportation firms, clearly shaken by these developments, did not give in to Rockefeller and his associates without a fight. In 1878 they began pressing New York and Pennsylvania lawmakers to investigate the railroads' relationship with Standard Oil. Under the state charters granted to the railroads, the independents argued, these companies did not have the legal authority to obstruct other pipeline and railroad companies; nor could they discriminate against oil refiners and producers by offering rebates to some and refusing to haul the oil of others. Convinced they had enough evidence against Standard Oil, a group of producers and refiners filed suit. In April 1879, the Grand Jury of Clarion County, Pennsylvania, indicted John D. Rockefeller, William Warden, Charles Lockhart, Henry M. Flagler, George W. Girty, and Jacob J. Vandergrift on the charge that they had created a business conspiracy. To the dismay of many in the Pennsylvania oil region, however, the suit was settled out-of-court when those who were charged agreed to discontinue their ignominious practices. Many independent oilmen nevertheless believed that Standard had bribed public officials to effect this compromise. As a result, the already heightened animosity toward Standard Oil in the oil region—just one county north of the Kiskiminetas Valley—intensified. It would remain intense for years.

In 1881, two years after the Standard Oil indictment and legal "compromise," J. J. Vandergrift moved his family out of the oil region to the newly developed elite and upper-middle-class Pittsburgh suburb of East Liberty. Presumably the move occurred so Vandergrift could more closely oversee a new set of investments he had made in and around Pittsburgh. Moreover, Vandergrift's wife, Henrietta, was ill (she died later in the year), and residency in Pittsburgh placed her close to her family and better medical treatment. An additional reason for the move may have been that, notwithstanding Vandergrift's having maintained ties to the oil industry until his death in 1899, he wanted to put some distance between himself and the legal problems he had encountered in the oil region.[10] After he moved to Pittsburgh he turned his attention to banking, real-estate speculation, and a partnership with ironmaster Joshua B. Rhodes of Pittsburgh.

The Vandergrift-Rhodes firm, Penn Tube, made tubes and pipes for the oil industry. Penn Tube was Vandergrift's first sortie into the iron industry.

Looking to secure a source of galvanized sheet iron that could be used to make oil-storage tanks and oil drums, in November 1883 Vandergrift's son J. J. Jr. extended the family's interest in iron when he bought a galvanizing works at Ninth and Pike in Pittsburgh's Fifth Ward. Ultimately, it became one of several properties belonging to Volta Iron, the firm that Vandergrift Jr. et al. formed with Laufman and McElroy.

Three years later (1886), Vandergrift Jr. became a member of a new firm called Apollo Iron and Steel. It consisted of J. J. Jr. himself (with 172 shares), his father J. J. Sr. (with 2,017 shares), his cousin Charles W. Batchelor (172 shares), the elder Vandergrift's personal secretary James I. Buchanan (2 shares), Buchanan's brother Douglas (2 shares), and three established Pittsburgh iron manufacturers: J. M. McQuiston (who owned 459 shares), Otis H. Childs (2 shares), and George G. McMurtry (174 shares). Notably absent from this slate of investors were Philip Laufman and Sarah McElroy; they no longer had a financial interest in the mill.[11] From hereon, J. J. Vandergrift Sr. was the firm's major stockholder, while George McMurtry became its guiding force.

George Gibson McMurtry

George McMurtry's life story is more difficult to establish than are those of Philip Laufman, William Rogers, or J. J. Vandergrift Sr. In McMurtry's obituary in the steel industry's trade paper *Iron Age*, Robert A. Walker called McMurtry "one of the most modest of men"; he displayed "an unusual aversion to publicity." The death notice in the *New York Times* said that his name was "never seen in print." He left neither a voluminous set of writings nor many personal papers; nor did he contribute biographical sketches to the multitude of cyclopedias and directories that were published between 1880 and his death in 1915. The biographical sketch presented here is pieced together from McMurtry's obituaries in the *Iron Age*, the *New York Times*, the *Pittsburgh Press*, and the *Vandergrift Citizen*. The federal manuscript censuses for 1870, 1880, and 1900 and other mentions in trade journals and labor newspapers that appeared during his lifetime corroborate some—but not all—of the points included in these obituaries.[12]

McMurtry (fig. 2.3) was born near Belfast, Ireland, in 1840. His parents died in the Great Potato Famine later that decade and the young boy went to live on the farm of a strict Covenantor (Scots-Presbyterian) uncle. A bored and some-

Fig. 2.3. George Gibson McMurtry Sr. (From *American Magazine* 80 (1915): 42. Photo courtesy of the Library of Congress, Washington, D.C.)

what unruly teenager in the 1850s, McMurtry ran away during his mid-teens to join the British army. His position as a bugle boy lasted only a few days—until McMurtry's worried uncle discovered his whereabouts and informed the commanding officer that the boy was too young to be in the army.

George clearly wanted to leave the farm, but he was not able to do so until he was twenty, emigrating to New York City in 1860. Unable to secure any work, he traveled to Detroit, supposedly arriving with only a few cents in his pocket. What employment he found there is unknown, but within a few years McMurtry had started his rags-to-riches climb to the top of the steel industry. During the early 1860s, he worked in the Chicago office of a Pittsburgh iron manufacturer, Benjamin Jones (since Jones did not have an industrial plant in this location, it

must be assumed that McMurtry held the position of clerk or agent). After serving in the Union Army during the Civil War, he moved to Pittsburgh to work for Jones at Jones & Laughlins. There he began to make many business contacts within the relatively small, tight-knit group of Pittsburgh iron barons.

By 1880, McMurtry had left Jones's employ to establish his own firm making nuts and bolts. With his wife Clara (whom he married in 1870), their three sons, two Irish servant girls, and a carriage driver, he lived on fashionable Irwin Avenue in Allegheny City, only a few blocks away from iron makers Benjamin Jones, Joshua Rhodes (Vandergrift's partner at Penn Tube), John Moorhead, Richard Wood, William Burt, and Jacob Painter.[13] Sometime between 1883 and 1886, McMurtry joined up with the Vandergrifts to become a part of Volta Iron. At the time of the 1886 Apollo Iron and Steel purchase of the Apollo mill, McMurtry occupied Volta Iron's chairmanship. With Apollo Iron and Steel, from the firm's inception until 1899, when it was integrated into the American Sheet Steel Company, he held the position of president.[14]

No evidence exists to indicate that McMurtry ever lived in either Apollo or Vandergrift.[15] However, the historical record suggests strongly that McMurtry was very much in charge of the many industrial restructuring changes—the new management practices, technological improvements, and workforce modifications—that occurred at the Apollo mill during his tenure there, even if it was from the downtown Pittsburgh business office that Apollo Iron and Steel occupied in J. J. Vandergrift's Fourth Avenue Vandergrift Building. To understand why McMurtry made these changes and why the company's Apollo workforce had such a hard time adjusting to them, to the extent they would strike, it is necessary to know something about the introduction of steel production, about the rise of unionism, and about ongoing relationships between capital and labor in southwestern Pennsylvania during the 1880s and early 1890s.

Industrial Restructuring and Steelmaking

The U.S. steel industry emerged in Promethean fashion from the iron industry, beginning in the 1860s. In the shift from iron to steel, iron gradually became less important as an end product and more important as an input material necessary to steelmaking. Since the eighteenth century iron makers had known that blister steel could be made by heating stacks of wrought-iron sheets with charcoal until the surface of the iron acquired a high carbon content. The sheets were then fused together, producing a material that was stronger than iron but

of inconsistent quality. Early in the nineteenth century, producers successfully made small amounts of a more homogenous steel by raising the temperature of wrought iron well beyond its melting point in a small, clay-lined crucible. But this process, too, presented difficulties. Individual heats were limited to roughly sixty pounds, and the clay suitable for crucible linings was in scarce supply. Steel thus remained an expensive, minor, and highly variable product until producers could expand crucible capacity and perfect better linings.[16]

During the 1850s, England's George Bessemer developed a method for converting larger amounts of iron into steel. Carbon and phosphorus could be literally exploded (or "blown") out of pig iron by forcing a high-pressure cold-air blast into a large, egg-shaped converter filled with molten iron. Technical problems slowed the diffusion of this innovation in the United States because Bessemer's first converters required very special grades of iron ore—grades that were in short supply. Additionally, steelmakers could not recarburize the pure iron inside the converter to make steel with any consistency. As a result, between 1864 and 1876 only ten of the thirteen U.S. firms that attempted to make steel using the Bessemer process were successful. In 1872, only about 4 percent of all U.S. pig iron found its way into a Bessemer converter. By 1880, these difficulties had been largely resolved. Nearly 28 percent of the pig iron produced in the United States became Bessemer steel, whence it was turned into rails. Still, only eleven works, with a total annual capacity of 1,750,000 gross tons, could afford to install Bessemer converters and ensure that a steady supply of Bessemer-quality iron ore would be available to keep them in production.[17]

During the 1870s, smaller iron firms began to install a different technology that would allow them to make steel: the Siemans-Martin regenerative open-hearth furnace. In concept, the open-hearth process was simply an extension of the iron-puddling process. Within a large furnace lined with firebrick of high acid content, furnace workers brought pig iron to melting point. Instead of removing the iron from the furnace as it began to boil—to give to a puddler and his helpers to stir, knead, and squeeze—the iron was left inside the furnace for eight hours or more (depending upon the grade of ore being used). During this lengthy "heat," impurities in the iron fused onto the furnace lining or floated to the top of the molten mixture. After the slag had been drained away, unskilled workers introduced scrap iron and coal to the molten metal to add the necessary carbon to make steel.

Although smaller, slower, and, therefore, incapable of producing as much

steel as the Bessemer process, the open-hearth process was more affordable and practicable for smaller producers. Given the relative ease of adjusting the open-hearth process to accommodate ores of varying sulphur and phosphorus contents, open-hearth producers could worry less about searching for ores that met exactly with Bessemer converter specifications. In 1880, twenty-two U.S. steelworks had open-hearth furnaces, and the total annual capacity of these works was 275,000 gross tons. Fourteen years later, the number of open-hearth works had increased to eighty-one and the annual capacity was 1,740,000 gross tons. One of those eighty-one works was Apollo Iron and Steel's Apollo mill. Its annual capacity was 27,000 gross tons.[18]

Major geographical revisions took place at several spatial scales due to the diffusion of the Bessemer and open-hearth processes. As metallurgists learned to adjust converters and furnaces to compensate for ores of fine consistency and high phosphorus content, mining and steel firms began to exploit iron-ore deposits in Minnesota and Michigan. Moreover, the spatially scattered system of independently owned and operated mines, furnaces, forges, foundries, and iron-rolling mills started to give way to functionally and spatially integrated steelmaking complexes on a single site that consisted of blast furnaces that converted ore to pig iron, Bessemer converters and open-hearth furnaces that transformed iron into steel, and rolling mills where hot steel was worked and reworked to make bars, rails, rods, and sheets. Inside these fully integrated steelworks, producers arranged the new steelmaking equipment so as to transfer hot materials from one process to the next as quickly as possible and with as little reheating as possible. Large ladles mounted on steam-powered hoists poured molten metal into ingot molds on movable cars. "Dinky engines" shunted these molds around mill yards and into the elongated steel sheds where rolling equipment and heating pits were located. Inside the rolling mill, a British visitor wrote in 1901, "it is a familiar sight to see a billet [ingot], one end still in the furnace—its length in all the reducing passes of the mill, and the other end coiled on the reel, a finished wire rod."[19]

As steel plants started to appear on the southwestern Pennsylvania landscape after the 1870s, changing labor requirements precipitated an expansion of the number of people employed at all skill levels. The mills hired more laborers to reline furnaces, shovel raw materials, charge furnaces with scrap, and do other manual tasks. At the same time, they needed more clerks, bookkeepers, stenographers, and telephone and telegraph operators to oversee and keep inventories,

manage payrolls, and take care of other business matters. As firms installed more rolling machines, they hired additional skilled rollers and semiskilled matchers, catchers, and roughers.

Alongside these changes, there occurred a major redefinition of the roles that skilled craftsworkers played in the mills. Most notably, by converting iron ore and pig iron directly to steel, the need for puddlers waned. But even in the mills where puddlers remained, they saw declines in the autonomy they had enjoyed under iron production (rollers, too—though their craft was in demand—saw a decline in autonomy). Mill owners had started to challenge the subcontracting system in which skilled craftsworkers hired their help directly. Steelmakers now took responsibility for hiring semiskilled and unskilled helpers and the foremen who oversaw them. Furthermore, mill owners began tapping different labor pools to acquire these workers. Worker ethnicity had always been strongly correlated with occupations during the "Iron Age." Immigrants from England, Wales, Ireland, and Scotland (and their children) held skilled (and semiskilled) mill positions, and Pennsylvania-born workers with long-term ties to the agricultural parts of the region did most unskilled jobs. In the "Steel Age," however, English, Welsh, Scots, Irish immigrants and their descendants lost some of their importance as skilled workers. They did, however, come to dominate overseeing, clerical, and some redefined skilled positions.

The most significant change in the "ethnic division of labor" occurred among the ranks of unskilled laborers. Instead of using rural Pennsylvania as a source of unskilled labor, steel producers began to look to South, Central, and East Europe. Coming to the U.S. with few skills and resources, the newest wave of immigrants worked at whatever jobs they could—even in poor conditions and for low pay. Some were lucky enough to move into permanent jobs, but most immigrant "day laborers" had little job security and toiled under nearly unbearable conditions doing menial tasks that most Americans and Northwest Europeans would not take.[20]

From the steelmaster's point of view, these workforce changes were desirable. Because of the massive influx of European labor into the United States, employers believed they had greater flexibility over personnel decisions. Access to a seemingly unlimited "reserve army of labor" helped them to control labor costs. Furthermore, the fragmentation of the workforce by skill and ethnicity meant that workers had little common ground on which to coalesce as a group and voice their grievances. But that did not mean that mill workers remained silent about wages and work conditions. The 1880s and 1890s go down in the

annals of U.S. history as two of the worst decades for labor disputes in the iron-and-steel industry.

To some it is surprising that unskilled immigrant labor—the group that suffered generally the worst working conditions and the lowest wages in the steel industry—were not the first workers to disrupt production. Differences in language and religion, lack of job security, the fact that many viewed their sojourn in the United States as temporary, and their exclusion from existing craft unions kept them from uniting to make demands of employers. It was from the ranks of the *skilled* craftsworkers, who desired job security and stable wages, that, between the 1860s and 1919, labor unrest generally emanated.

The Union Response

During the 1880s, skilled craftsworkers saw steel manufacturers start to replace the puddling process (and puddlers) with open-hearth furnaces and Bessemer converters. They grew worried as Bessemer and open-hearth departments began to set the pace of production for the remaining rollers. Something had to be done. They turned to their unions, believing that, as in the past, collective action on the part of all skilled iron workers would allow them to weather the stormy conditions of industrial change.[21]

In the so-called iron age of the 1860s, puddlers, rollers, nailers, and other skilled workers had formed separate labor organizations: the Sons of Vulcan (the puddlers' union), the Heaters and Rollers' Union, and the Roll Hands' Union. Among their initial concerns were wages. The Civil War had caused an increase in the price of iron, and with that there had been an increase in wages. But after the war ended, prices declined, and so did pay. As a result, the newly organized skilled ironworkers struck to maintain the higher wage. To bring this dispute to a close, Benjamin Jones (the Jones who was George McMurtry's first boss in the iron industry) suggested and got Pittsburgh iron manufacturers and union members to adopt a sliding wage scale that would respond to the rise and fall of iron prices. This scale would also include a minimum wage below which employers could not go. The system worked fine during the relatively prosperous late-1860s. But it was a different story after the Panic of 1873.

Throughout the late 1860s and early 1870s, iron companies periodically met with union representatives in Pittsburgh to set the wage scale for the next contract period. When the economy took a downward turn after 1873, however, manufacturers announced that they could not afford to maintain the scale and

would have to terminate it. The puddlers' union—the Sons of Vulcan—countered by proposing a fifty-cents-per-ton wage reduction in the scale. This loss would be easier for skilled workers to bear than what might occur if the manufacturers were allowed to cut wages at will. The manufacturers, however, responded that they had to cut at least one dollar off the per-ton wage. Because an agreement could not be reached, in 1875 many mill owners locked out Sons of Vulcan members from their mills. Some mill owners brought in replacement workers to continue producing. But most owners did not go to such lengths because they believed that workers would capitulate. They were wrong. After several months of having production drastically affected by the dispute, the manufacturers agreed to keep the scale.

The Sons of Vulcan won this round because union leaders appealed to the puddlers' sense of camaraderie and honor. They had achieved solidarity and discovered safety in numbers. In turn, they solidified their bargaining power by combining with the other unions—the rollers' and heaters' and the roll hands'—to create the Amalgamated Association of Iron and Steel Workers in 1876. Membership, however, was limited to skilled craftsworkers and their supporting crews. Unskilled workers were not included. By creating an exclusionary organization, labor itself was divided.

At first, union/nonunion fragmentation along occupational lines did not have an adverse affect upon the Amalgamated. In the late-1870s it successfully gained wage increases from Pittsburgh iron makers nearly every year. But the organization's fortunes started to change during the early 1880s. This was due to three factors: First, lack of solidarity with unskilled laborers meant that with the growth of large, integrated steelworks, an ever-larger proportion of the labor force was nonunion. Second, iron makers answered union solidarity with solidarity of their own. In 1882 they joined together to lock out union members for five months at Amalgamated mills across southwestern Pennsylvania. Third, the rank and file successively elected two conservative union presidents who accommodated technological and workforce change and capitulated to mill ownership. These leaders believed that redundant puddlers and others put out of work by industrial restructuring would be able to fill other mill jobs created by this same process. The problem was, however, that these puddlers had to compete for jobs with the children and friends of rollers and other skilled union workers who remained in the mills. Such competition led to increased fragmentation and tension among the skilled workforce. During the lean years of the early 1880s, the unions found these factors hard to combat and had difficulty gaining increases in the wage scale.

As the economy improved in the late-1880s, however, manufacturers were more willing to meet union wage demands, and the Amalgamated experienced a resurgence. By 1892 it had grown to a membership of more than twenty-four thousand workers. These members were organized into 290 local lodges (usually 1 per mill) and 90 of them were clustered in southwestern Pennsylvania. They met with manufacturers each spring to set the wage scale for the following year; they instituted work rules to combat technological change; they threatened and called strikes. Moreover, they had great success in organizing mills that were in the midst of making the transition from iron to steel. If the iron puddlers and rollers in a mill were unionized, the union found it relatively easy to extend membership to all skilled steelworkers in that mill. As historian John Ingham argues, the Amalgamated effectively promoted and spread a culture of work to nearly every southwestern Pennsylvania mill. Given the size and cohesiveness of the union during this period, iron and steelmakers regularly capitulated (with some resignation) to the demands of labor. That is, until Homestead.[22]

In 1892, Andrew Carnegie and his partner, Henry Clay Frick, provided their fellow ironmasters and steelmasters with a model for eliminating union activity in mills undergoing the transition to steel. That spring, Frick announced that when union contracts ran out in June, their Homestead mill would become nonunionized. Meanwhile, he had fences and watchtowers built around the mill in preparation for the labor dispute that he believed might follow. On July 1, 1892, Frick locked out Amalgamated members with the intent of reopening the mill six days later and staffing it with nonunion replacement workers whom the company would train for skilled positions. He also hired Pinkerton guards to protect the plant. Problems arose, however, when Homestead's union members became involved in a gun (and fireworks) battle with the Pinkertons. Despite several fatalities and many injuries, the union workers seized the plant and occupied the mill.

Infuriated, Frick called upon Pennsylvania's governor to send in the state militia to oust the occupation force and to provide protection for his replacement workers and the mill. The militia did so, and on July 19, 1892, the open-hearth department resumed operation. Five months later, Homestead was entirely nonunion. The Amalgamated had been completely defeated.

Steelmakers soon witnessed what was possible without the union presence in the Homestead mill: "Tonnage rates were slashed, twelve-hour turns were extended to at least one-third of the workers, breaks in the working day that had once been prescribed by union rules were eliminated, and workers were reas-

signed at management's discretion, while new charging machines, heating furnaces, automatic roll tables and other equipment eliminated an estimated five hundred jobs in Homestead alone by the end of the decade."[23] Other producers, facing production problems similar to those encountered by Carnegie and Frick at Homestead before 1892, wanted to achieve this, too.

In the late-1880s, the Amalgamated had been nearly universal in southwestern Pennsylvania, but in the aftermath of Homestead the *Bulletin of the American Iron and Steel Association* reported that in less than a year more than thirty of the area's sixty-four steel mills had become nonunion.[24] Thus, in 1892 the battle lines were drawn between capital and labor in the entire U.S. iron-and-steel industry. McMurtry and Apollo Iron and Steel entered into their own skirmish as they began to oust the Amalgamated from the Apollo mill.

The Effect on the Apollo Mill

The industrial restructuring changes that culminated in tensions between capital and labor began later in the Apollo mill than they did at Homestead and in most southwestern Pennsylvania iron-and-steel mills. Sanborn fire-insurance maps of the Apollo mill show that Apollo Iron and Steel entered the steel age only in the late 1880s. In 1886, the production site typified most iron-rolling mills of the day (fig. 2.4): iron making occurred almost entirely under one roof. Puddling crews transformed pig-iron ingots into wrought iron in a furnace shed near the mill's main building. From the shed, laborers carted wrought-iron blooms into the main rolling-mill building, where a steamhammer removed the impurities. Rollers and heaters then directed their helpers as they reheated the iron and pressed it into sheets. The rolled material cooled in adjacent annealing furnaces before being shipped to customers.

Over the next three years, Apollo Iron and Steel made several changes (fig. 2.5). To increase capacity, the firm expanded the puddling shed to accommodate more puddlers. The firm tore down the charcoal house and several miscellaneous outbuildings. In the main building it installed a new set of rolls, removed the knobbling fires, and increased the horsepower of the steam-driven engines. North of the main building, the firm added a galvanizing department and new, larger warehouses to store finished sheets and supplies. The addition of a scale house tangibly reflected the new accounting measures being introduced in the industry at the time. The firm also built an internal rail system that connected several mill buildings to the WPRR spur that ran down the middle of Warren

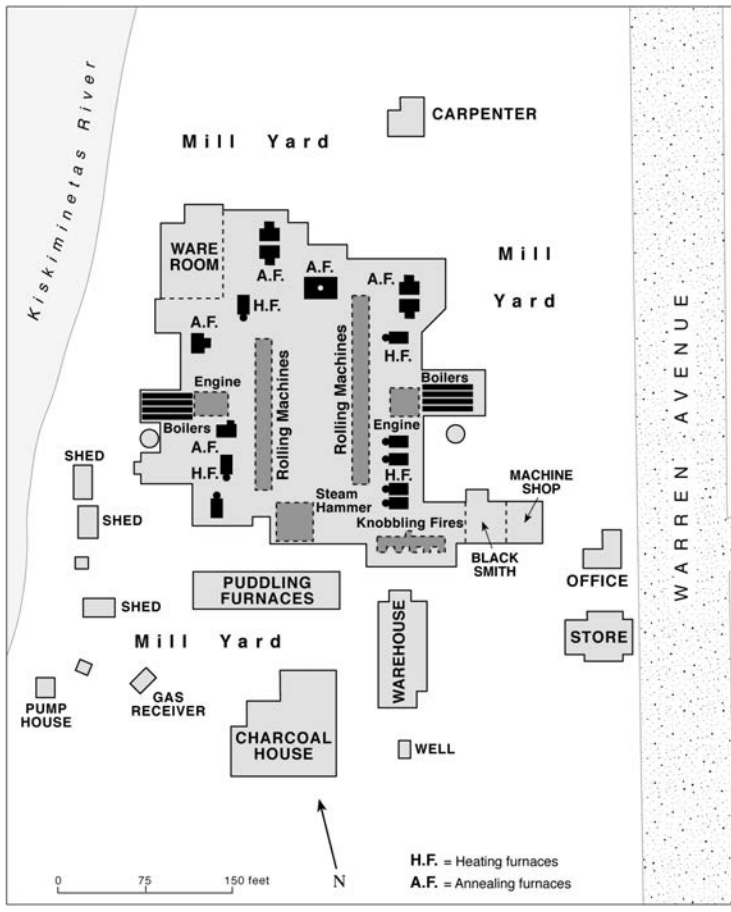

Fig. 2.4. Layout of the Volta Iron Company mill, 1886. Note the location of the knobbling fires in the main mill building and the puddling furnaces and charcoal house immediately to the south. By 1894, they would be erased from the mill's landscape, replaced by steel-production equipment. (After a map by the Sanborn Map Company.)

Avenue (notably, the railroad had crossed the river into Apollo). The most significant change, however, was the addition of a new, iron-clad structure south of the puddling shed, where the firm installed an ingot-heating furnace and two twenty-gross-ton open-hearth furnaces in which to make steel.

Materials moving through the mill went first to the shed that housed the ingot-heating and open-hearth furnaces. "Dinky engines" shunted cars laden with pig-iron ingots to these sheds. Laborers on the "charging" floor manually loaded

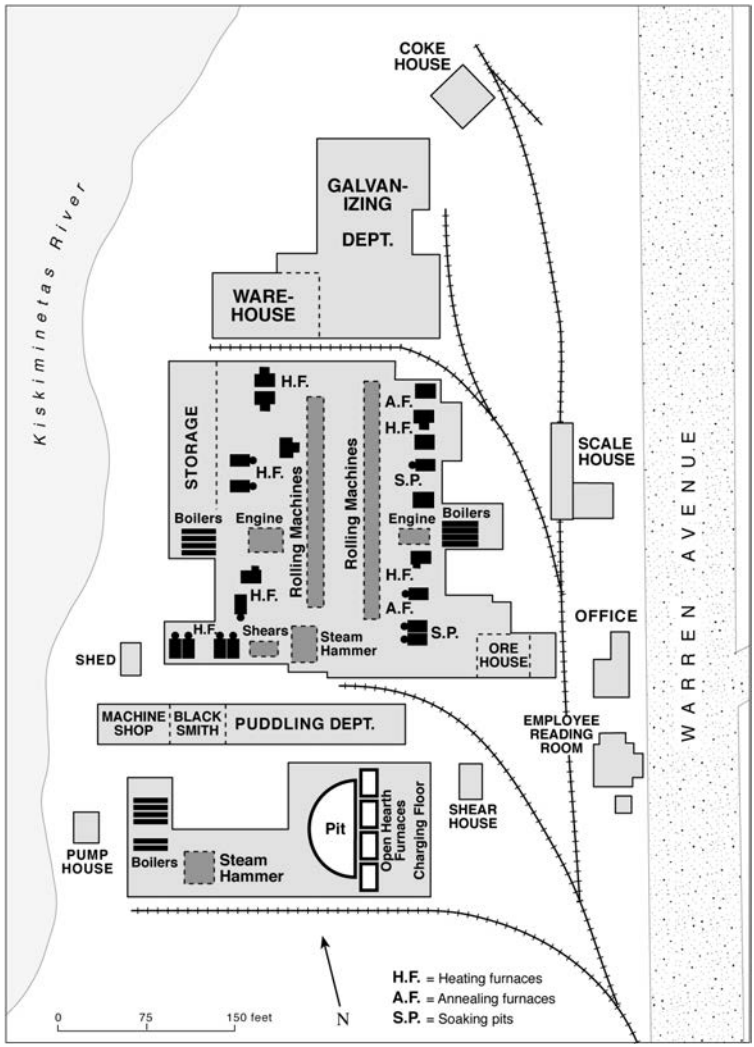

Fig. 2.5. Layout of the Apollo Iron and Steel Company mill, 1889. Changes made between 1886 (see fig. 2.4) and 1889 are apparent. Most significantly, the firm installed open-hearth furnaces for making steel and a rail system that connected mill departments to the WPRR. (After a map by the Sanborn Map Company.)

scrap steel and warm pig iron into the open hearths, the amounts varying, depending upon the phosphorus and sulphur content of the pig-iron inputs and the desired steel output. The furnaces were then heated for anywhere from eight to ten hours. During the heat, the first helper kept watch over the temperature, while the melter—the man in charge of the entire open-hearth process—periodically made tests to determine if additional materials were required to make the proper bath of hot metal. For most workers around the open hearths, there was little to do between charging and tapping the furnace at the end of the heat. At Apollo, the amount of slack time was reduced by the staggering of heats between two furnaces. Between tasks, some workers may have occupied themselves in the employee reading room located near the mill gate.

The harsh working conditions during charging and tapping more than made up for any free time that furnace helpers may have enjoyed. During charging, they worked directly in front of open furnace doors in searing heat. At the end of the heat, the second and third helpers went to the back of the furnace to drill open the tap hole—an outlet sealed with clay prior to the heat. As they drilled, ladlemen hoisted huge, steam-powered hydraulic ladles down into the pit, an area that was located below the tap hole. The ladles caught the molten steel as it flowed from the furnace. At this point, furnace helpers ran up to the ladles and manually dumped bags of coal and other materials into the hot metal to recarburize the steel. Simultaneously, molten slag flowed from the top of the ladle and into the pit. The risk of injury was very high, especially for the unskilled workers. The ladlemen then hoisted the ladle out of the pit and directed it to the rail sidings, where cars carrying empty ingot molds waited to be filled. Once filled, dinky engines shunted the molds to the entrance of the rolling shop, where a mechanical stripping machine freed the hot ingots. Workers then placed the ingots (crusty black on the outside, blood red in the middle—like what today many Americans call a "Pittsburgh-style" medium-rare steak) into the soaking pits, where they were reheated to a uniform temperature before rolling.

The actual rolling process changed little over the years, save for increases in speed, capacity, and the fact that steam-driven reversing rolls and mechanical lifting tables had put hook-up men out of their jobs. Once heater's helpers had removed the hot ingots from the soaking pits, they took them to the roughing rolls to be impressed with a rough surface that could be more easily gripped by the sheet rolls. Semiskilled roughers guided the ingots into the furnace-side of the rolls. On the opposite side stood the catcher, who directed the metal back into the rolls for a second pass. The rougher and the catcher passed the ingot

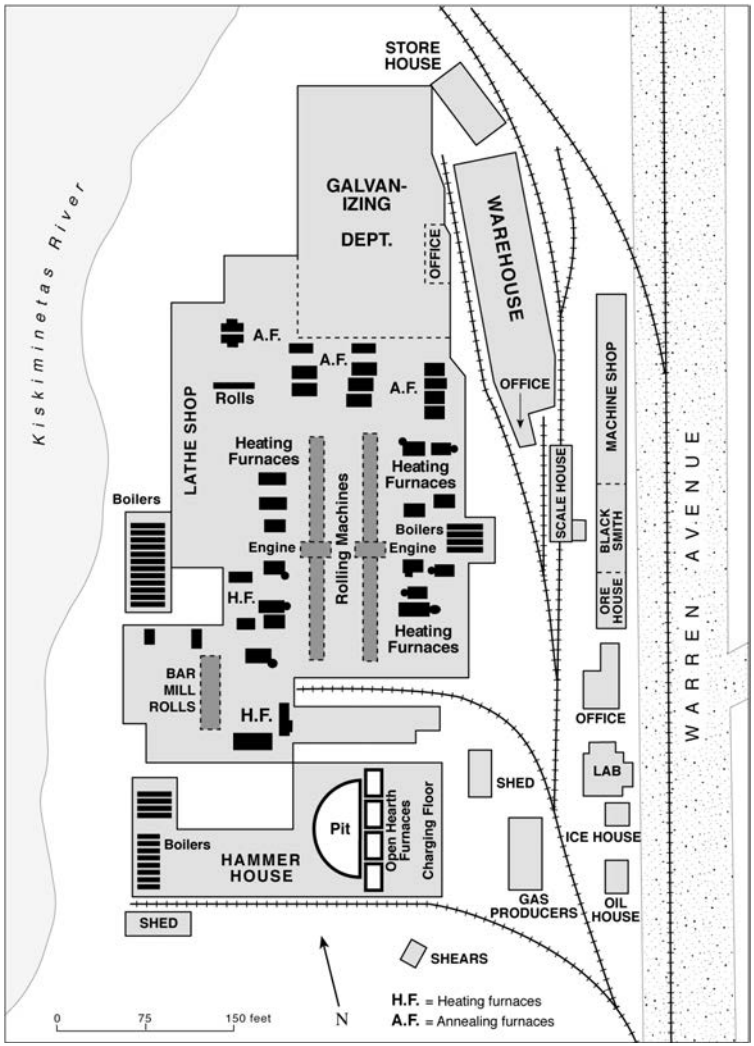

Fig. 2.6. Layout of the Apollo Iron and Steel Company mill, 1894. Major changes made between 1889 (see fig. 2.5) and 1894 included the demolition of the puddling furnaces. By this point, the mill's enlarged physical plant nearly touched the edges of the property. (After a map by the Sanborn Map Company.)

back and forth through successively smaller apertures until it reached the desired shape and size. The roller oversaw this entire operation, but no longer as in the past from the rolling-mill floor; instead, the roller directed workers from the "pulpit," a raised platform equipped with a series of levers that controlled the speed and pressure of the rolls. After an ingot had been pressed into a sheet or plate, laborers carted it away from the rolls and off to the annealing furnaces for cooling. In the galvanizing department, unskilled galvanizers coated the sheet with zinc, and after the coating cooled other laborers loaded it onto rail cars for shipment to buyers.

The striking aspect of the 1889 mill layout is the juxtaposition of new steel-producing technologies alongside old iron-making equipment. The Sanborn Company's 1889 map captured this iron mill in the midst of its transition to steel. Open-hearth furnaces made steel at the same time that puddlers still produced wrought iron by hand in the shed next door. By 1894, however, Apollo Iron and Steel had completed the transition to steel (fig. 2.6). That year, the mill had an annual production capacity of 27,000 gross tons. Out of twenty-five steel mills in southwestern Pennsylvania, it ranked twelfth.[25] Around the mill grounds, the firm had now redeployed several outbuildings for new uses. It made the employee reading room into a laboratory, where chemists, newly hired, assumed the melter's responsibility for testing the properties of molten metal, firebricks, and ingots. The firm also fitted blacksmith shops and machine shops into the remaining free space within the mill complex and extended the entire steelworks to the Kiskiminetas River's banks, and it demolished the puddling furnaces in order to extend the main building to accommodate a bar mill that reduced ingots to more convenient dimensions for sheet rolling.

Thus between 1886 and 1894, the Apollo mill took on a new spatial order—one intended to make steel as efficiently as possible. The general configuration of the various departments was intended to speed the flow of materials in the transition from input to output. But in this last round of additions, McMurtry and the firm started to encounter problems finding space in which to put more equipment.

The Effect on Apollo Borough

During the 1860s, the Borough of Apollo covered a little less than one square mile (fig. 2.7). Building densities were greatest near where the bridge over the old canal and the Kiskiminetas River led out of town to Paulton. Forming a com-

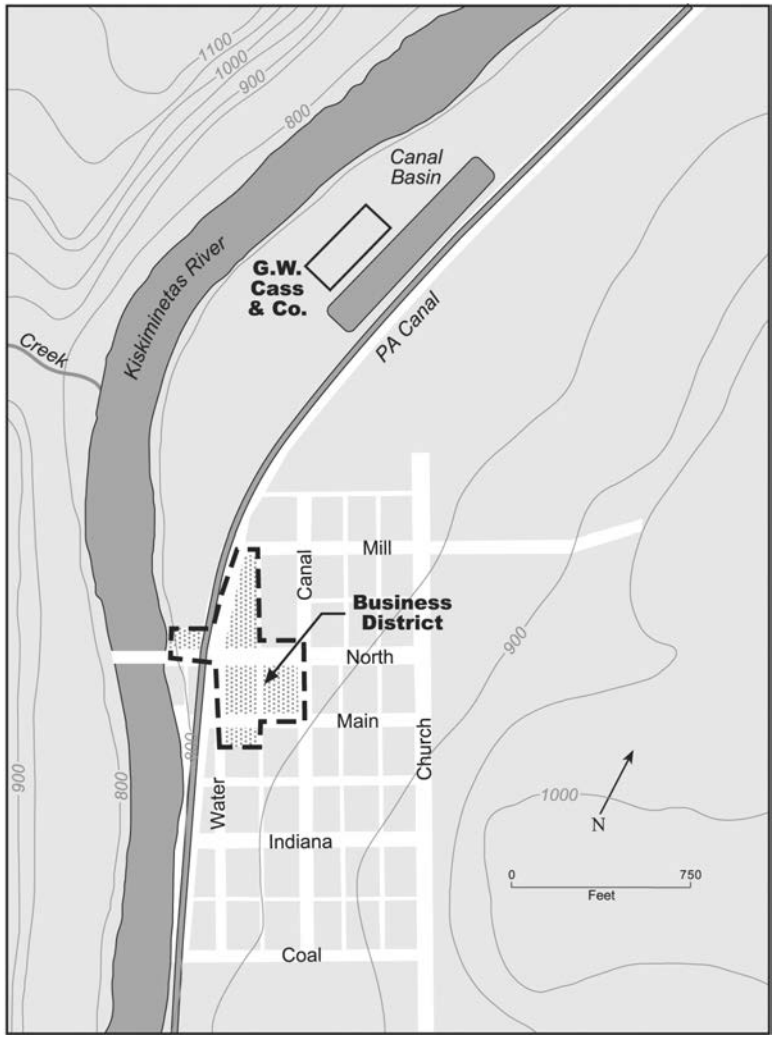

Fig. 2.7. Map of Apollo, Pennsylvania, 1861. The Cass company was successor to Kiskiminitas Iron. (After A. Pomeroy and S. W. Treat, *Map of Armstrong County, Pennsylvania.*)

mercial area in that neighborhood were an assortment of general stores, newspaper, doctor, and dentist offices, a bank, a post office, and a variety of shops—harness makers, merchant-millers, and a blacksmith. Surrounding this core was a loosely knit and variegated residential landscape. The oldest dwellings—traditional brick, Pennsylvania-variants of the "I House"—occupied the level allu-

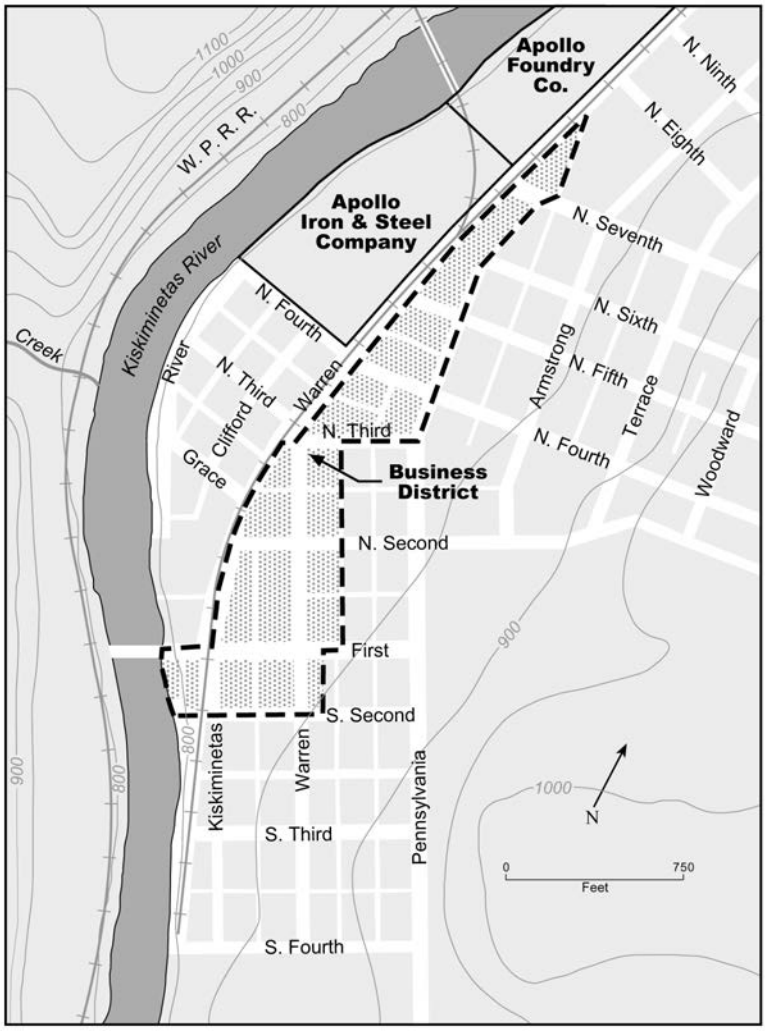

Fig. 2.8. Map of Apollo, Pennsylvania, 1894. Compare with figure 2.7 to see the burgeoning steel mill's impact on the town. New residential and business tracts gravitated north along Warren and Pennsylvania Avenues toward Apollo's industrial sites after William Rogers introduced tin production in the 1860s and 1870s. Greatly expanded by 1894, Apollo Iron and Steel had been pinned in by the river, industry, homes, and business on all sides. (After a map by the Sanborn Map Company.)

Fig. 2.9. Bird's-eye view of Apollo, Pennsylvania, 1896. Looking northeastward into town, the Apollo Iron and Steel Company is sandwiched into cramped quarters between the Apollo Foundry Company (the long building immediately above the WPRR bridge at upper left), the Kiskiminetas River, and the rest of Apollo. (Litho reproduced courtesy of Historical Collections and Labor Archives, Special Collections Library, Pennsylvania State University.)

vial terrace closest to the Kiskiminetas River between Coal and Mill Streets.[26] Their front doors opened directly onto the street. Gardens, chicken coops, pigpens, and sundry sheds could be found at the back. East of Church Street and north of Mill, a hodge-podge collection of newer, rectilinear street blocks had been platted along the terrace and up the sides of the Kiskiminetas gorge, with no regard whatsoever for the difficult street grades that resulted. Sprinkled throughout were single-family, detached, frame dwellings of various architectural styles, a few churches, corner grocery and dry-goods stores, and tenement houses. The rolling mill, one of several manufacturing firms located in town, was down by the river, where the closest large tract of flat ground had been available when Kiskiminetas Iron built it in 1854.

After McMurtry arrived at Apollo Iron and Steel and spearheaded the mill's transition to steelmaker, Apollo changed rapidly and dramatically (figs. 2.8 and 2.9). In the older section of town, the commercial core expanded—by half a block to the east and by two blocks to the north—as property owners selectively leveled or substantially modified the old canal-era houses to accommodate new shops and offices. The WPRR came to town, too—finally satisfying Apollo's desire for its own rail connection by building a rail bridge north of the mill, a spur that occupied the filled-in canal bed along Warren and Kiskiminetas Avenues, and a train station in the old commercial core. Obviously, the amount of business the town now generated justified the expense.

The Apollo rolling mill became the focal point of even greater land-use change. To the south of North Fourth Street, four new streets were platted and more than twenty new houses erected. To the east of Warren Avenue, an entirely new commercial district emerged, consisting mainly of barber shops, saloons, grocery stores, milliners, and hardware stores. To the north and east of this district, carpenters built dozens of modest new homes for sale. Property owners in older sections of town subdivided larger lots and sold vacant ones to make way for new housing. Between the censuses of 1880 and 1890, Apollo expanded by more than two hundred households and 1,000 people, from 1,156 to 2,156. The 1890 tax-assessment records suggest that the majority of households owned their accommodation.

Some of these landscape and population changes were not unique to Apollo. Between 1880 and 1900, old canal towns and iron towns in western Pennsylvania grew rapidly. McKeesport, home of Dewees Wood, an old competitor of Rogers & Burchfield, increased in population from 8,212 in 1880 to 34,227 in 1900. Growth in Homestead, Leechburg, and Apollo reached similar levels.

Only towns without manufacturing firms experienced slower growth (during the twenty years after 1880, for instance, the population of the canal town of Freeport grew by only 150). Pinned between revamped and newly constructed riverside mills and the rolling upland plateaus of the region, the physical fabric of streets, railroad sidings, businesses, and houses in burgeoning southwestern Pennsylvania mill towns spread quickly over the remaining vacant flat and gently sloping bottom land. Pressure for more residential space pushed the gridiron pattern of streets and alleys up steep hillsides and into deep hollows. Within central business districts, a changing mix of commercial functions reflected the new social structure and needs of the population. Flour and grist mills, saddlers, grain dealers, and general stores gave way to butchers, barbers, restaurants, saloons, dry-goods stores, photographic studios, shooting galleries, and pool halls.

Several new manufacturing firms—the Apollo Rolling Mill, the Apollo Foundry, the Pittsburgh Electro-Plating Company among others—joined Apollo Iron and Steel's mill and the array of traditional agriculture-oriented, resource-processing activities that dated from the canal era.[27] Once catering to a small resident population and a large and thriving agricultural hinterland, Apollo's merchants now looked inward to service a growing urban manufacturing population.

Apollo's occupational structure began to reflect changes brought on by industrial restructuring (table 2.1). Manufacturing dominated the occupational structure. Within the metalworking occupations, there was a slight increase in

Table 2.1. Apollo Occupational Structure, 1880, 1890, and 1895

Occupation	1880 %	1890 %	1895 %
Managers	21	22	18
Farm	4	1	trace
Service	7	9	13
Craftsworkers	23	21	20
Operatives	12	17	20
Laborers	33	31	30
Total number employed	226	479	644

Note: The discrepancy in the total number of employed persons in Apollo between Tables 1.2 and 2.1 is due to a difference in data sources. Table 1.2 is based on the U.S. federal manuscript census. It most likely gives the most accurate numerical count for 1880. Comparable census data is not available for 1890, however; thus, I have used the local tax rolls between 1880 and 1895 as a means to track occupational changes during the transition to steel production in the Apollo mill.
Source: Apollo Borough Tax Assessment Records, 1880–95.

the proportion of craftsmen, but this subtle change disguises important developments that occurred. Predictably, the removal of puddling furnaces meant that there were no puddlers living in Apollo in 1890. In terms of the census's occupational categories, however, foremen, machinists, millwrights, and an increasing staff of rollers more than compensated for this decrease in the number of puddlers. Mechanization and specialization of tasks within the rolling process contributed to growth of the occupational category of operative. Mechanical lifting tables and reversing rolls meant that fewer unskilled laborers were needed inside the rolling mill to lift ingots, bars, and sheets. Rolling crews were reduced in size and performed more skilled and specialized tasks. Outside in the mill yard and furnace sheds, laborers were needed in increasing numbers to move raw materials. As would be expected, given the emergence of a second business district between 1886 and 1894, there was an increase in the number of sales, clerical, and service workers. Cost-accounting schemes in the mill required more clerks, timekeepers, and watchmen. Away from the mill and commercial district, the number of residents employed in farming decreased, farmers having been virtually pushed out of the borough because of residential expansion. Larger farm lots were subdivided for housing.

Accommodating newcomers created new social geographic patterns in all of southwestern Pennsylvania's mill towns. Novelist Tom Bell, in *Out of This Furnace*, a story of immigrant life in Braddock, describes the impact that increased pressure for housing had upon the landscape and social conditions of most steel towns in the late-nineteenth and early-twentieth centuries:

> Real-estate speculators put up the houses that became so characteristic of the steel towns, long ugly rows like cell blocks, two rooms high and two deep, without water, gas or conveniences of any kind, nothing but the walls and the roofs: Zeok's Row on Halket, Veroskey's Row along the P. and L. E. railroad, Mullen's double row on Willow Way, were typical. They were filled as soon as they were finished and made no apparent impression on the housing shortage or the rent level.[28]

The same conditions could be found all the way up the Monongahela Valley from Homestead to McKeesport and up the Allegheny Valley to Ford City. On Pittsburgh's South Side near the Jones & Laughlins mill and below the Point at Jacob Painter's ironworks, they were equally bad. There was little spatial separation between dwellings and the hot, dirty, noisy, and dangerous rolling mills and blast furnaces. Roads, frequently unpaved, were cleared of debris by scavenging pigs. Inhabitants of hodge-podge collections of as many as twenty shacks,

one- and two-stories tall, built around muddy courtyards, shared perhaps one well and one privy.

Pittsburgh, Braddock, McKeesport, and many other mill towns had more polite neighborhoods. Higher-paid workers—clerical, professional, and crafts people—moved to single-family or semidetached houses on separate lots up and away from the mills. In some instances, these neighborhoods had water mains and sewers, and an increasing number of new homes had indoor plumbing. Thus, in Pittsburgh and other mill towns, there usually emerged a range of residential districts—"hunky" flats, Little Italies, white working-class neighborhoods, and areas of architecturally ornate and individualized homes owned by managers, mill owners, and merchants.

Apollo, however, was different. Judging from names in the county tax-assessment rolls during the early 1890s, there were very few recent European immigrants. The social division of labor had not become equated with an ethnic division of labor. Nor, on the evidence of later rolls, would it in 1900 and 1910. Moreover, there does not appear to have been any stark segregation along socioeconomic lines. As one traveled across town, areas of modest housing occupied by unskilled and semiskilled workers segued gradually into areas of greater affluence. It appears that the majority of Apollo residents owned their accommodations and that they were not at the mercy of landlords to the same extent as in the mill towns closer to Pittsburgh.

Similar to places elsewhere in southwestern Pennsylvania, however, residential infilling and expansion of the residential portions of Apollo continued through the 1890s. While it created a real-estate and commercial boom, such growth increasingly had a negative impact on Apollo Iron and Steel. A fragmented pattern of property ownership made it difficult for the company to expand when it wanted to install new equipment. McMurtry tried to acquire more property by approaching landowners to the south and north, but they refused to sell or their asking price was too high.[29] Apollo's landscape of freely held and mortgaged houses helped to tie workers to the town and the mill (which promoted a stable workforce), but those same houses and other structures got in the way of the firm's expansion plans. Having extended the mill to the water's edge and to the limits of the firm's main property, Apollo Iron and Steel simply ran out of room.

Throughout the 1880s and early 1890s, Apollo Iron and Steel continually purchased rural properties in the Kiskiminetas Valley, but usually only for the mineral and natural gas rights. In 1892, however, the firm started a different sort

of acquisition campaign in response to space limitations in Apollo. Beginning in February, the company purchased through seven separate real-estate transactions the rights, both subterranean and surface, for the equivalent of a section (640 acres) of land in Westmoreland County, about a mile downriver from Apollo. The first parcel, the Townsend farm, came at a sheriff's auction for $15,000. Two months later, Apollo Iron and Steel convinced a farmer's widow to sell her property for $2,100. In August and September, the firm bought two more farms, followed by two more in December. A final purchase occurred in June 1893. In total, Apollo Iron and Steel paid $59,187 for the land on which it planned to build a new steel mill.[30]

Due to a collapse in steel prices during the spring of 1893, the idea of immediately starting construction of a branch mill on this property apparently met with opposition from the company's shareholders, which at the time included Norman Ream (a Chicago businessman who was a key organizer of the firm that later became Nabisco), Vandergrift's Penn Tube partner Joshua Rhodes, Vandergrift, J. D. Archbold and Henry Rogers from Standard Oil, Vandergrift's personal secretary, James I. Buchanan, and George McMurtry. Until the economy improved, the Apollo Iron and Steel Westmoreland County tracts would remain a melange of pasture, orchards, and wooded ravines. As it stood, the company's immediate attention was elsewhere, anyway—focused squarely upon an iron-making workforce whose skills, work culture, and wage demands had become increasingly out-of-synch with Apollo Iron and Steel's new role as a producer of galvanized steel sheets.[31]

The Apollo Strike and Lockout of 1893–1894

Apollo Iron and Steel's labor problems began with the demolition of the puddling furnaces between 1889 and 1894. In a stroke, the company made redundant at least a dozen highly skilled puddlers, many of whom were the sons of the workers that William Rogers had recruited from Wales and England. Given that the Amalgamated experienced record levels of membership (approximately 24,000 members) in 1892 and had lodges in nearly every southwestern Pennsylvania mill, it is almost a certainty that these puddlers were members of the Amalgamated's Hope Lodge, number 17. Not a word was said in the *National Labor Tribune* about their termination, however—perhaps because puddlers were being dismissed at iron-and-steel mills all over southwestern Pennsylvania and the experience in Apollo was not unique, perhaps because the Amalgamated believed

that the puddlers could find work elsewhere, perhaps because the issue of puddler termination had turned union members of different occupations against each other.[32] Nor did mention of this specific case appear in the *Bulletin of the American Iron and Steel Association*, although in 1894 it reported a similar case in the Jones & Laughlins mill that abandoned more than sixty puddling furnaces and terminated the employment of well over a hundred puddlers.[33]

In any event, the unionized rollers who remained in the Apollo mill became increasingly suspicious of their employer. Their wages were protected by contracts negotiated between the Amalgamated and the Sheet Iron [Manufacturers'] Association that McMurtry had helped to found (in 1892 he was vice-president of the organization), but this was small consolation for rollers. What if the rolling process were to be mechanized to an extent that would replace rollers altogether? At the very least, how much longer would rollers be able to make hiring decisions regarding their help? For Apollo's rollers and thousands of workers in similar positions elsewhere, there appeared to be less job security and decision-making autonomy under the new steel-production regime. The rollers concluded that the union needed to take a more active role. That, in turn, posed a threat to Apollo Iron and Steel.[34]

During the summer of 1893, orders for steel hit their lowest level since the 1873 Panic. To continue production during this cyclical economic downswing, the Sheet Iron Association, in annual negotiations with the Amalgamated Association, proposed a reduction in wages of 8 to 15 percent. Even though the manufacturers ultimately compromised with the Amalgamated for a lesser reduction, several union rollers at Apollo Iron and Steel refused to work at the lower rate and in August 1893 went on strike. The firm countered by shutting the rolling mill, arguing that the slump presented a good opportunity to make some necessary repairs.

By October, the repairs had been made, orders had increased, and Apollo Iron and Steel wanted to reopen, but following Carnegie and Frick's lead, the firm decided that it would restart the mill without union labor and Amalgamated-set wages. The firm withdrew its membership from the Sheet Iron Association (thus nullifying the union wage scale at the Apollo mill) and McMurtry resigned his leadership position in that organization. The company locked unionized workers out of the mill and declared that only those workers who renounced union membership would be allowed to resume their jobs. A month later, Kirkpatrick & Co., in Leechburg, locked out their workers, too.[35] Trade and union papers reported that over the next several months, Apollo Iron and Steel successfully

Table 2.2. Assessed Apollo Laborers and Rollers, Showing Laborer Promotions, 1891–1895

Tax Year	Number of Laborers	Number of Rollers	Laborers Promoted
1891	148	24	21 (1891–92)
1892	149	25	16 (1892–93)
1893	*143*	*28*	*42 (1893–94)*
1894	*183*	*15*	*35 (1894–95)*
1895	146	26	

Note: Apollo strike and lockout years are highlighted in italics.
Source: Apollo Borough Tax assessment Records, 1891–95.

resumed operation because it did four things: first, it hired experienced rollers from other nonunion mills; second, it trained nonunion mill operatives, clerks, and foremen to take skilled positions; third, it promoted laborers to semiskilled operative positions; and fourth, as laborers it brought in farm boys, their farmer fathers, and miners from the surrounding countryside. A trace of individual workers through the county tax-assessment records during this period corroborates these reports (see table 2.2 and the appendix).[36] Basing my search on the experiences of 456 skilled rollers and unskilled laborers between 1892 and 1896, I found that the promotion of laborers to semiskilled positions increased significantly during the strike and lockout.

James Jack Jr. stands out as one of these laborers. Most of the replacement rollers came from the semiskilled ranks, the pool of clerical workers, or elsewhere. But Jack was a laborer in 1892—one of only three to be fast-tracked to the position of roller. In 1894 the tax rolls listed him as a heater; in 1895, he had become a roller; in 1896, he occupied the position of catcher. Apollo Iron and Steel rewarded Jack for his apparent willingness to fit in where the firm needed him: he was the catcher on the inaugural Vandergrift rolling crew.

The tax records also corroborate the assertion that most unionized Apollo rollers did not accede to Apollo Iron and Steel's demands. They honored the strike. Only three of twenty-seven rollers listed in the 1892 assessment remained in their rolling jobs every year until 1896. One of the three persistent rollers—who would have been considered a "sheep," or blackleg, by union members—was Harry T. Henry, the roller in charge of the crew that rolled the first steel sheet at Vandergrift. There is a high probability that the others, James Owen and Harry Shaner, worked across the river at Laufman, where there was no la-

bor dispute. Eighteen of the remaining twenty-four union rollers apparently refused to work under nonunion conditions. Either these workers permanently left town or they never resumed their old jobs. One of those rollers was Griffith Davis, the First District trustee for the Amalgamated Association of Iron and Steelworkers. Significantly, with the exception of Henry, none of the 1892 rollers moved to Vandergrift.

The tax records also suggest that Apollo Iron and Steel hired a number of replacement rollers. Seventeen rollers appeared in the tax-assessment records for the first time in 1894 and 1895. Unfortunately, the destruction of the 1890 federal manuscript census of population makes it impossible to trace the origins of these workers (possibly they were from other nonunion mills in southwestern Pennsylvania). Two-thirds of the recruited rollers who stayed until 1896 purchased property in or moved to Vandergrift by 1900.

Notably, all but two of the entire population of laborers and rollers in Apollo between 1892 and 1896 had surnames of northern European origin. In tracing them to the 1900 census, none were born in southern, eastern, or central Europe.[37] Unlike mills closer to Pittsburgh that had growing numbers of foreign-born laborers (e.g., Carnegie's Homestead works and National Tube in McKeesport), McMurtry did not rely upon immigrant labor for replacements at the unskilled and semiskilled levels during the labor dispute. He hired replacements from the surrounding countryside—specifically, the teenage farm boys of the Kiskiminetas Valley who were looking for opportunities off the farm, as their older brothers, cousins, uncles, and fathers had done in the 1870s and 1880s. This is one of the reasons why, during the late-nineteenth and early-twentieth centuries the entire Kiskiminetas Valley came to be known as Black Valley, after "blackleg" replacement farmers, miners, and other "sheep" from rural areas.[38] Immigration did not play a significant role in providing a supply of cheap labor for the mills in the Kiskiminetas Valley until after 1900.

In the final analysis, Apollo Iron and Steel's training and promotion schemes effectively wiped out the union's presence in the mill by (1) transforming unskilled, nonunionized laborers into semiskilled, nonunionized operatives, and (2) making semiskilled, nonunionized operatives and clerical workers into skilled, nonunionized craftsworkers. Locked-out union workers did not acquiesce by going back to work under nonunion conditions. At first, they organized meetings to promote their cause and give mutual moral support. The *National Labor Tribune* reported that support for the lockout was widespread, and lodges across Pennsylvania, Ohio, Indiana, and even Alabama contributed funds to the

"boys in Leechburg and Apollo." Several articles also appeared saying that there had been fist fights in Apollo and Leechburg between union members and replacements, a knife fight, several incidents of spitting, and more than one attempted shooting. The tensions between the sides became so severe in the Kiskiminetas Valley that in November 1893, Kirkpatrick and Co. obtained a court injunction to stop Amalgamated members from trespassing on their property or interfering with nonunion workers at Leechburg.[39]

There is, however, some evidence that a few skilled workers renounced their union memberships and remained loyal to Apollo Iron and Steel and George McMurtry. One of these workers wrote to the union newspaper to say that "there has been nothing but lies printed about the workings in the mill since it started up non-union" and "if that is the kind of stuff it [the *National Labor Tribune*] is filled up with don't send it to me any more."

Throughout the lockout, most union workers assumed that McMurtry would eventually grow weary of "trying to make rollers and heaters out of civil engineers, railroad firemen, and farmers." As the lockout wore on through 1894, however, some union rollers and their families appeared to tire. They started looking for opportunities elsewhere, including the new unionized iron plants that were opening in Ohio, Indiana, and in Pennsylvania at nearby New Kensington, Hyde Park, and Saltsburg. Indignant at McMurtry's success at keeping the mill open, in the spring of 1894 one locked-out worker wrote in a letter to the *National Labor Tribune:*

> I think it is an outrage on American citizens that men like George G. McMurtry should be allowed to drive men from their homes to seek work elsewhere because they have too much honor to become his slaves and let him walk on them. It is not safe for a[n] honest upright man to walk the streets of Apollo now; he is sure to be insulted by the kind of man McM. has got working for him, and they are armed to the teeth with revolvers, knives, and all kinds of death-dealing instruments. But I expect to see the most of them go back to farming again, now that the sun begins to shine, where they ought to have stayed.[40]

Judging from the number of replacement workers who moved to the Vandergrift mill in 1896 (see chapter 5 and the appendix), the author's prediction was wrong. Many replacements decided to leave the farm forever in order to work for McMurtry. McMurtry was to reward them by giving them first chance at buying lots in Vandergrift.

Throughout late 1894 and into early 1895, an occasional letter from Apollo

or Leechburg appeared in the *National Labor Tribune* from a striking/locked-out worker. Most stated that "we are still here," but their tenacity had earned them nothing. A settlement was never reached with Apollo Iron and Steel or Kirkpatrick & Co. Both mills became nonunion.[41]

Unlike Homestead, the Apollo lockout and strike attracted little attention outside of the steel industry and the region. This sort of friction was common in the United States during the 1880s and 1890s, and perhaps politicians, social reformers, and the American middle class had become anesthetized to such a relatively quiet and localized disagreement between capital and labor. Nevertheless, the event profoundly influenced McMurtry and Apollo Iron and Steel as he and the company made plans for the recently acquired Westmoreland County property. There the company could escape the disadvantages of the Apollo mill site. There George McMurtry could make a new social environment sans unionization and uncooperative property owners. Apollo Iron and Steel began building a mill, and George McMurtry joined with John C. Olmsted and Charles Eliot to plan a town that would enhance and not hinder the company's ability to make steel. Ultimately, Apollo would be left behind.

Part 2 / Vision, Plan, and Place

The Creation of Vandergrift

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CHAPTER THREE

The McMurtry, Olmsted, and Eliot Plan for Vandergrift

In the midst of the 1893–94 Apollo labor dispute, George McMurtry went to Europe.[1] Although the historical record is silent regarding his primary motives for departing southwestern Pennsylvania at such a critical moment, McMurtry's travel itinerary suggests that he was on something of a reconnaissance mission, taking him to the Schneider family's holdings at Le Creusot in France, the Krupp estates near Essen in Germany, and various British factory villages. Social reformers and commentators had made these special industrial towns internationally famous in the popular press and trade papers and on lecture circuits during the 1870s and 1880s. Hailed as models that other industrialists might usefully copy, these places not only served as the settings for successful production sites but also incorporated company-provided housing, schools, social programs, and physical infrastructure for worker consumption. Due to the amount of a priori planning involved (including the employment of architects and landscape designers) and to the resulting trim, orderly landscapes, writers easily concluded that these towns indeed seemed to be better than Europe's unplanned, chaotic, and socially unruly industrial districts. Therein lies the reason for McMurtry's visit.

As many later students of the "model industrial town" have observed, industrialists such as the Schneiders, the Krupps, Titus Salt (founder of Saltaire, near Bradford, in England), Lord Leverhulme (founder of Port Sunlight, also in England, near Liverpool), and George Pullman (founder of Pullman, Illinois) premised the special industrial places they created on a set of modern Enlightenment attitudes about supposed links between environment and behavior. According to their environmentally deterministic line of thinking, populations that lived in seemingly wild, corrupt, and disorderly physical environments could be expected to behave in wild, corrupt, and disorderly ways. If living and working spaces were somehow tamed, made honest, and designed in a rational way, then social behavior would follow suit. For industrialists, this meant offering something to workers other than the cramped, dirty, and unhealthy houses and neighborhoods that had become emblematic of the late-eighteenth- and nineteenth-century industrial city. They built their model towns thinking that well-designed, company-built residential landscapes would ultimately compel workers to be reliable, honest, loyal employees. By providing a living environment that looked better than workers might find elsewhere, capital, as a social class, came to believe that it would have little trouble rationalizing the production process and appeasing—if not controlling—labor. Could McMurtry use this philosophy as a strategy for distancing steelworkers from the Amalgamated?[2]

Just as McMurtry was formulating an answer to this question, a lockout and strike at Pullman, Illinois, called into question the entire practice of company-backed industrial-town building. Throughout the 1880s, Pullman had been the United States' archetypical company-built town. By providing rental housing, meeting halls, a library, and shopping precinct near his sleeper-car works, George Pullman tried to prove that: (1) industrialists could receive a positive return on investments in housing; and (2) through environmentalism they could reap the benefits of a good, loyal, and controllable workforce. Like the European model-industrial-town builders, he believed that these goals were attainable by use of expert urban design that provided an ordered physical setting for the daily work routine.[3]

After the Pullman dispute, Populists and social reformers saw company-built towns as embodying everything that was evil about big business as it had emerged in the United States. Social commentators remarked that excessive employer involvement in the home life of workers was manipulative and an infringement of workers' rights; in other words, Pullman was a despotic and, therefore, un-American place. These commentators showed that Pullman and

his investors had set fixed rents on housing in an attempt to secure a 6 percent return, while workers in the Pullman factory were paid according to a sliding wage scale. When times were hard, as in 1894, the workers found it difficult to pay for shelter. The company refused, however, to lower rents or fix a minimum wage; for Pullman's workers, the only options were moving out or rebellion.[4]

Pullman's use of rental housing to generate additional profits for the company had resulted in worker unrest and public criticism, precisely the situation that Apollo Iron and Steel wanted to avoid in their new company-built town. Rental housing adjacent to the new Apollo Iron and Steel mill would, therefore, be out of the question. Apollo Iron and Steel would instead sell houses—a corporate strategy that McMurtry had already witnessed at Le Creusot and the Krupp estates. This strategy offered several advantages. First, by owning residential property, workers built equity, took pride in, and were uplifted by their homes. Second, by making fixed investments in housing, workers made financial and emotional commitments to the town in which they lived and to the jobs they held. Third, by participating in company real-estate ventures, workers assumed from their employers the responsibility for maintaining housing and infrastructure. For such schemes to work, however, housing had to be affordable to industrial workers. As he and other steelmasters had done when challenging the Amalgamated during the transition from iron to steel, McMurtry could again turn to Andrew Carnegie for a model: after the Homestead strike at Munhall, Pennsylvania, Carnegie, instead of raising wages so that workers could buy homes freehold, offered low-interest loans for housing near the Homestead works. McMurtry decided to mimic Carnegie's scheme.[5]

By the spring of 1895, McMurtry had developed a vision for Apollo Iron and Steel's new town. Through a practicable, tangible, and strategic application of environmentalism and home ownership to urban design, the company would foster a loyal workforce: it would handpick the initial pool of prospective buyers, making sure that they had no union affiliations. A complete package of infrastructural improvements, an aesthetically pleasing town design, and easy mortgage terms would serve as selling points. The price of lots in the town would pay for amenities: buyers would pay for what they got and get what they paid for; thus, the company would avoid "playing providence."[6]

Next came the task of translating these ideas into an actual town design and landscape. Proceeding on the assumption that Frederick Law Olmsted's attitudes and experience meshed with his environmentalist agenda for the new town, McMurtry made inquiries at Olmsted's landscape firm. Over the next year,

McMurtry discovered the frustrations of town planning, especially when dealing with a firm as tenacious and idealistic as Olmsted, Olmsted, & Eliot.

The First Vandergrift Town Plan

On April 25, 1895, Apollo Iron and Steel's treasurer, Wallace P. Bache (who was also McMurtry's personal secretary) urgently inquired about the landscape-design and town-planning services of Frederick Law Olmsted Sr.

> Dear Sir:
>
> Our company proposes to build a new town on a tract of land located a mile and a half below our present works (at Apollo, Pa.), comprising 640 acres of farm property. We desire to have a town that in many features will be unique, and in all respects more attractive than the average manufacturing town of the present day. In fact, we want something better than the best. We want to know—first, if you can undertake the laying out of this town for us, and in the second place, what are your terms for getting up the plans for a town of this character? Also, please say if you can come out here and look over this ground with us, and when you could do this. That is to say how soon can you come out here[?] We are anxious to get this work started, and, of course, the quicker we could begin operations the better. We might say that we propose building new a new works in this new town that will probably employ in the beginning fifteen hundred men. The property lies on the Kiskiminetas River, in Westmoreland County, Pa., and is considered one of the most available sites for a town lying within forty miles of Pittsburgh.
>
> Awaiting your prompt reply, we remain,
>
> Yours very truly,
>
> Apollo Iron and Steel Co.
>
> Wallace P. Bache, Treasurer

A postscript urged that "an answer reach us by Saturday of this week by wire, at our expense."[7]

By 1895, when Apollo Iron and Steel contacted his firm, Olmsted Sr. was considered the premier figure in a small but important group of professional landscape gardeners, architects, and designers.[8] Since the 1850s, he had been involved in the planning and design of several highly visible projects, among them New York City's Central Park (1857), the model suburb of Riverside, Illinois (1869), Prospect Park, in Brooklyn (1871), and, more recently, the 1893 Chicago World's Columbian Exposition. As his career progressed, Olmsted came to be-

lieve that urban economies of scale and the heightened patterns of accessibility found in cities were important, if not essential, to national economic growth. Nevertheless, he believed that urban life was debilitating. To lessen the confusion and disorder of cities, he proposed fundamental urban improvements. Like other reformers of his day, Olmsted believed that well-designed sewer, drainage, and water-supply systems were essential to the continued survival and growth of cities. He also thought that there existed in nature aesthetic and re-creative qualities that could counter the psychologically harmful aspects of city life. Thus, Olmsted, his partner Calvert Vaux, and other landscape designers and town planners, including H. W. S. Cleveland, designed romantic and rustic parks where elite city dwellers could mix with the poorer urban masses. Both groups were to have access to an uplifting "natural" environment. For wealthier residents who wished to live away from the city and who could afford the daily trolley ride to work, the regenerative aspects of parks were incorporated into designs for model suburbs.[9]

The urban forms that Olmsted proposed were expensive, but he believed that the long-term economic benefits to the country as a whole far outweighed the costs to individual municipalities. Positive environmental changes in cities and suburbs were seen as a way to improve the social and mental health of the populace; in turn, urban residents would be more efficient in the work place. Thus, Olmsted subscribed to the same environmentalist logic that McMurtry had encountered in Europe: social order was achievable through environmental order. Olmsted, however, was more than seventy years of age when Apollo Iron and Steel contacted him. In failing mental health (it is today believed that he had Alzheimer disease), he was relinquishing an active role in the landscape firm to his partners Charles Eliot and John Charles Olmsted, his stepson, both of whom had been his apprentices.[10] In the process of withdrawing from both the firm and reality, Olmsted Sr. had recently blundered through many business transactions. Eliot and the younger Olmsted, understandably sorrowed by the elder Olmsted's condition, tried to cover up or correct mistakes that had been made. They also faced the task of completing several major projects (notably, the Vanderbilt family's Biltmore Estate in Asheville, North Carolina).[11] By the end of May 1895, when it became clear that Olmsted Sr. could no longer be trusted to carry out the firm's business, John C. became the effective head of the firm.

Apparently anxious to take on new clients and perhaps a little worried that their business might fail with the elder Olmsted more or less out of the picture, John C. Olmsted and Eliot assured Apollo Iron and Steel via return post that

"the fact that others have employed our firm for work similar to yours, with little or no attention from Mr. F. L. Olmsted personally would seem to indicate that you might find the services of the Junior members worth what they would cost."[12] Five days after this reply, a representative of the firm, Edward D. Bolton, made the first of at least ten Olmsted, Olmsted & Eliot visits to the town site, and McMurtry and Bache personally conducted him around the property.

Bolton noted that McMurtry and Bache had reserved "about 70 to 80 acres for the [steel] works in the bottom land" on the northwest side of the peninsula formed by the Kiskiminetas River (fig. 3.1).[13] To the east of this reserved tract was a shallow bluff and an undulating, rectangular-shaped tableland that gradually rose toward the south and east. The sides of this tableland were formed by the river to the north, river bluffs to the east and west-southwest, and a steep uphill-slope to the southwest. The property extended one mile up the southern hill, and from the top one could see the thickly wooded hills of Parks Township to the north, Gilpin Township to the northwest, and the town of Apollo directly to the east. McMurtry desired an Olmsted town design for the rectangular portion of the peninsula. The steep hill to the south was to be saved for future residential development.

As the trio examined the property, McMurtry also presented to Bolton a mental blueprint for the town that largely reflected economic constraints and business considerations. Nearly all flat land on the property was to be saved for the steel mill and other industries. Commerce and industry were to be kept as separate from the residential district as possible. There were even ideas concerning where various streets and public buildings should be placed within the plan:

> The [railroad] station is to be located as far towards the northwest as possible, so as to avoid bringing strangers in close contact with the works upon their entering the town, thus avoiding the dirt and smoke and *disagreeable features of labor troubles which are liable to occur.* . . . The main street will be located upon the higher land where the stores, banks, etc. will be built, and the town will extend to the south and west of the main street, at first. . . . It is desired that there be, if possible, a public square where the prominent buildings will be placed, and the other streets radiate from it as far as possible.[14]

As much as McMurtry let Bolton know that he had a set of economic and business requirements for the town, he also made clear other ideas underscored by social-reform arguments. For instance, McMurtry requested that Vandergrift be a "sanitary town." Influenced by sanitary reformers, he believed that sewers,

Fig. 3.1. Site of the Vandergrift mill. Looking southwest from a site north of the Kiskiminetas River at the undeveloped Apollo Iron and Steel Company property, circa 1894. McMurtry designated the area between river and the rail line as the site for the new mill. (From *Vandergrift Ready.* Illustration courtesy of the Library of Congress, Washington, D.C.)

water mains, and gas lines should be constructed prior to settlement. A year later, when Apollo Iron and Steel advertised town lots for sale, the firm explained this rationale by arguing that "by taking a little pains" and making a "town where average people can live and be healthy . . . our employees and their families would be a great deal more comfortable, be sick not half so many days in the year, live twice as long (if you count children) and be stronger."[15] It is obvious from the justifications that Apollo Iron and Steel gave for a sanitary town that an economic motive lay behind the provision of public improvements.

McMurtry also looked for ways to incorporate the basic logic of environmentalism. Like other company-town builders before him (particularly Salt, the builder of Saltaire), McMurtry believed that the Protestant work ethic and the promotion of temperance went hand in hand. On this matter the company wrote in 1896 that "no one will live there who wants any liquor-selling. All this money, saved for good food and clothes, good houses and furniture, pictures and books, and the schooling of children, makes happy and prosperous homes and plenty of business." The emphasis was, therefore, on the creation of a stable community and workforce that believed in American, not immigrant (and perhaps Roman Catholic), cultural values. Vandergrift would be a stable American community.[16]

McMurtry recognized, however, that the steel mill required unskilled laborers and that throughout western Pennsylvania manufacturers employed European immigrants to fill these jobs. To compete with these producers, non-Americans would have to be incorporated into the town plan. He suggested that Olmsted and Eliot plan a section of town where immigrants would live. During a later site visit, Olmsted (i.e., John C.) reported that "a small part of their men are Poles, Russians and Negroes. These are only laborers. . . . This class he [McMurtry] wants to keep away from near the works and I suggested the end of the river bank, and he agreed."[17]

Influenced by the Pullman strike of 1894, McMurtry also made it clear that Vandergrift was to be a town of privately owned, single-family homes. Bolton wrote that "the house lots are to be sold and not controled [*sic*] by the company in any way." Later, in an announcement that appeared in the trade journal *Iron Age*, it was explained that this policy would allow Apollo Iron and Steel "to avoid the dangerous tendency of playing providence.": "There is not the slightest taint of paternalism in the whole undertaking, and that, to us, proves a clear sighted understanding of American character and American conditions." In other words, Apollo Iron and Steel would not repeat Pullman's paternalistic mistakes because there would be no company housing.[18]

In deciding that the new town was to be filled with homeowners, McMurtry may have had two ideas in mind. The first was intrinsic to the basic pattern of thinking displayed at Pullman: towns built by industrialists should be considered first and foremost as business ventures. McMurtry was trying to recoup his firm's economic investment in the town's physical fabric as quickly as possible by passing Apollo Iron and Steel's debt to residents. The firm stated that "here you begin with more than any city's conveniences; all you have got to do is to buy your lot and build your house, and you own your share of it. This public work has been done at our expense; and you pay your part in buying your lot."[19] At the same time, however, McMurtry may have been trying to use home ownership to maintain social control. Workers who had committed their financial resources to a house and mortgage would not be willing to jeopardize their investment by striking.

Over the course of the summer of 1895, Olmsted and Eliot worked from Bolton's field notes, themselves made several visits to the site, and incorporated McMurtry's instructions into their design. Olmsted and Eliot had been commissioned to provide a town plan that would be better than Pullman, Le Creusot, the Krupp estates, Saltaire, or Port Sunlight. In fact, the landscape architects'

conceptualization differed markedly from nearly all industrial cities and towns. Apollo Iron and Steel's new town would not be a cramped, unsanitary, chaotic Pittsburgh neighborhood; it would not be a "coal-patch" row of houses; and it would especially not be an Apollo, latticed with grid-iron streets. It would, instead, echo McMurtry's economic and social agendas and the romanticism and rusticity characteristic of Olmsted's model suburbs.

Olmsted, Eliot, and their assistants worked on the Vandergrift plan from their office in Brookline, Massachusetts. John C. enthusiastically reported about the project to the ailing Frederick. In a letter to another son, Frederick Law Olmsted Jr., the father wrote enthusiastically that it was "the sort of work that I would like best, as being more comprehensive and more fully touching social problems on a large scale than others coming to us!"[20]

The elder Olmsted's great expectations for the town were clearly mixed with regret. Apart from the several parks that he had designed during his career, Olmsted had never had the opportunity to translate his broader ideas about urban reform into a large-scale landscape that incorporated several land uses and social groups. In the few instances where he came the closest to planning on a broader scale and scope in a model suburb, Olmsted typically had to modify his plans because they were either too costly or impracticable, the very same problems that would plague Olmsted's firm during this project. McMurtry's ideals for the town were lofty, and the interpretation put on them by Olmsted and Eliot made them more so. Furthermore, as the plan progressed and modifications were required, the elitist attitudes of Olmsted and Eliot about landscape aesthetics inevitably led to tension between their firm and the Apollo Iron and Steel Company.

Several design features typical of the Olmsted firm's model suburbs found their way into the residential portions of plan. On top of an engineer's survey, Olmsted and Eliot drew curvilinear streets that, to ensure proper sewer and storm drainage, ran slightly askew to the natural contours. Service alleys bisected each block. Single-family detached houses were to sit on lots with "an average depth of about 200 feet and a width of from forty to eighty or one hundred." Irregularly shaped parklets punctuated street intersections. Combined with the names that Olmsted and Eliot planned for the residential streets—Chestnut Road, Dogwood Road, Elderberry Road, and Woodbine Road—the residential design was to give the impression that Apollo Iron and Steel workers lived along the bucolic, genteel thoroughfares of a romantic garden and not in a noisy, smoky, smelly mill town or bustling market town.[21] The commercial section was

to be separate from the residential; moreover, it was to be monumental. Olmsted and Eliot expanded upon McMurtry's request for a public square for the town's important buildings. Drawing perhaps upon their intimate knowledge of the Court of Honor at the Chicago World's Columbian Exposition, they created a symmetrical and elongated space flanked by two streets. This space—to be known as the Village Green—was to be the focus of the town. At the northern (downhill) anchor of the Green would be the train station; the southern (uphill) anchor would be set aside by the company as a possible site for the Westmoreland County courthouse. According to the plan, on one side this space would be lined by hotels, stores, and an office building; on the other side would be a fence and the main gate to the mill. Later, Olmsted instructed the Apollo company on how the Green should be planted with trees and shrubs in order to achieve a "good city-like effect."[22]

Emanating from the Green was Main Street (now called Washington Avenue). This street, eighty feet in width, was to serve as an extension of the business district. Olmsted and Eliot, however, suggested that this thoroughfare be reserved for "minor trades and light manufacturing occupations . . . due to the fact it is more remote from the noise of the sheet-iron factory and would be surrounded on *all* sides by residence property, instead of being backed on one side by the noisy factory and having residences on one side."[23]

To ensure the rural character of the residential neighborhoods and the urbanity of the commercial district, Olmsted and Eliot urged McMurtry to include in each deed a detailed set of twenty-nine restrictive covenants that specified permissible uses for each lot (table 3.1). The suggested covenants were based on restrictions that had been developed in the Olmsted plan for the 1891 Baltimore model subdivision of Sudbrook. The first seventeen dealt with residential lots, limiting their use to residential purposes and designating the types of structures that could be built on them. Mandatory front and side setbacks were suggested, to provide air and light, to preserve the "rural effect," and "to prevent the crowded, cheap, bare and unrefined appearance which streets have when the walls of the houses abut directly upon the street." "Spite fences" between lots should be forbidden, and under no circumstances should property owners build tenements, place houses at the back of lots, or subdivide single lots for sale. It was also suggested that, "as in Paris," all house designs be approved by a board of architects. The remaining twelve restrictions were similar, but applied to commercial lots. Trades that injured surrounding property should not be allowed, and businesses should be barred from residential streets. Olmsted suggested that buildings erected on commercial-area lots should cost at least three

Table 3.1. Suggested Olmsted, Olmsted & Eliot Restrictive Covenants

Residential. Seventeen restrictions regulating:
Minimum house building-cost ($1,500)
Minimum house set-backs (20 feet)
Three-story limit for houses
Design review board standards
No framed rows of houses
No subdivision of lots
No tenements or alley houses
No "spite fences" or hedges
Commercial. Twelve restrictions:
Minimum business-building cost ($3,000)
Minimum business set-backs (5 feet)
Construction must be brick or stone
Height limit: four stories
No false fronts
No commercial intrusion into residential areas

thousand dollars. False fronts should not be permitted: "Such 'eye-sores' ought certainly to be prevented at any hazard, in your model town." Such restrictions not only would keep land uses separate, they would also, John C. argued, "advance the character of neighborhoods in social, sanitary and esthetic matters." Thus property values would be protected over the duration of the covenants.[24]

Construction of the town began almost as soon as the first Olmsted and Eliot plan arrived at the Apollo Iron and Steel Company office in Pittsburgh in June 1895. But hardly had the steam shovels started to grade the farm property and workmen to lay sewers and water mains when a series of conflicts developed, involving the landscape architects, McMurtry, and the Apollo Iron and Steel board of directors. McMurtry seems to have straddled the fence during the major disputes, trying to placate both the Olmsted firm and the directors. The resolution of these conflicts left lasting and major marks on the spatial organization and landscape of the new town. The lofty ideals with which McMurtry, Olmsted, and Eliot started were allayed in the process, precluding direct translation of the plan into reality.

Revisions to the Plan

The results of the Vandergrift plan turned out to be not as innovative and sensitive as other Olmsted efforts. The planning historian John Reps argues that

the plan "must be catalogued among the small number of inferior designs associated with the name of Olmsted." He claims: "The town has no central focus, no group of buildings that marks the center. Nor are the curving streets particularly well suited for business use, however admirable they may be for residential purposes." Nevertheless, Reps concedes that "it is not known to what extent the Olmsteds were inhibited in their design by the wishes of the company."[25]

Through the primary records, it is clear that the inadequacies of the plan did not emanate entirely from Olmsted, Olmsted & Eliot's Brookline office. Apart from McMurtry and J. J. Vandergrift, the directors of Apollo Iron and Steel had been hesitant to finance the creation of a *model* town; they had, however, been persuaded by events in Apollo to initiate the development of an *industrial* town.[26] Their hesitancy spilled over into their attitudes toward the Olmsted and Eliot plan. The directors requested design modifications of the plan to the point where John C. Olmsted desired to wash his hands of the entire project.

The initial conflicts that developed between the two men from the Olmsted firm and McMurtry (the latter representing not only his own interests but also those of Apollo Iron and Steel shareholders) were over relatively superficial matters of street names and tree planting. They were, nevertheless, indicative of differences in personal beliefs and professional style. Given their years of planning experience on behalf of the urban elite, Olmsted and Eliot recommended that McMurtry use the same building materials, trees, shrubs, architects, and engineers, and even the same restrictive covenants, that had been employed in the realization of earlier designs. Their recommendations reflected the firm's New England and upper-middle-class biases, which in turn became targets for shareholders' criticism. Apollo Iron and Steel wanted to build a less expensive town than their first letter to the Olmsted firm had implied. Furthermore, the economic integrity of the steelworks took precedence over the town design. Both the board of directors and McMurtry often found the Olmsted and Eliot ideas impractical and inappropriate for a western Pennsylvania steel town.

Within the residential areas, Olmsted and Eliot initially sought to blend toponymy and topography to give the impression of a stable, tranquil, and morally uplifting landscape, but McMurtry had a different scenario in mind. He suggested that "the names of streets might very appropriately be chosen from among the names of various statesmen and commanders in American history, that thereby patriotism and proper pride of country might be fostered and encouraged."[27] The Olmsted road labels were erased and replaced by Lincoln, Washington, Grant, Sherman, Jefferson, Franklin, Columbia, and other patriotic names.

On more than one occasion, McMurtry also used local popular taste as a justification for changes. In March 1897, John C. sent a letter to McMurtry expressing his ideas regarding the choice of plantings for the parklets and the Green: "As a matter of taste, we would prefer not to have any flowers, but they would, no doubt, be in accordance with the popular taste, and as you are obliged to cater to the taste of the majority to some extent in a commercial enterprise, you may decide to have some flowers."[28] It is apparent from the photographic record and the florist's annual bill to the town council for the petunias, impatiens, and marigolds planted in the parklets and Village Green that McMurtry chose to cater to popular taste. The only trees that McMurtry planted were poplars—the fastest growing variety available. Flowers were certainly cheaper to buy in the short run than the shrubs and "Oriental plants" that the Olmsteds suggested.[29]

Minor conflicts between McMurtry's conceptualization of the new town and the Olmsted and Eliot plan were relatively easy to resolve: he bade the landscape architects to make small modifications or he ignored their suggestions. And Olmsted and Eliot said little in favor or against this: as good consultants, they listened to and incorporated their client's wishes into the plan. They were less reticent, however, when the board demanded that changes be made to several major design features of the plan. At no time was this more apparent than when, less than a month after presenting the initial town plan, increasing space requirements for the mill dictated that Olmsted and Eliot reduce the size of the Village Green. To Olmsted and Eliot, the hallmark feature of the Village Green design was its symmetry. This arrangement was enhanced by the axial placement of the opposing anchors of the Green—the railroad station and the courthouse. The Western Pennsylvania Railroad and the steel company, however, rejected the location proposed by Olmsted and Eliot for the station because it would require a sharp and undesirable bend in the route of the main rail line and would not allow sufficient room for a switchyard for the mill's sidings. Solving the problem meant either rearranging the mill or moving the station. Keeping in mind Apollo Iron and Steel's desire to build the most spacious and well-designed mill that they could, McMurtry believed that the station site would have to be moved.

Since the first consultation with McMurtry, Olmsted and Eliot had considered the Village Green "an essential feature of the village, as giving it a suitable centre of focus." They were now faced with the task of salvaging the Green while incorporating the mandated changes into the plan. Their early modifications were rejected by Apollo Iron and Steel because they would require "heavy excavation and filling." Ultimately, the size of the common was greatly reduced. The

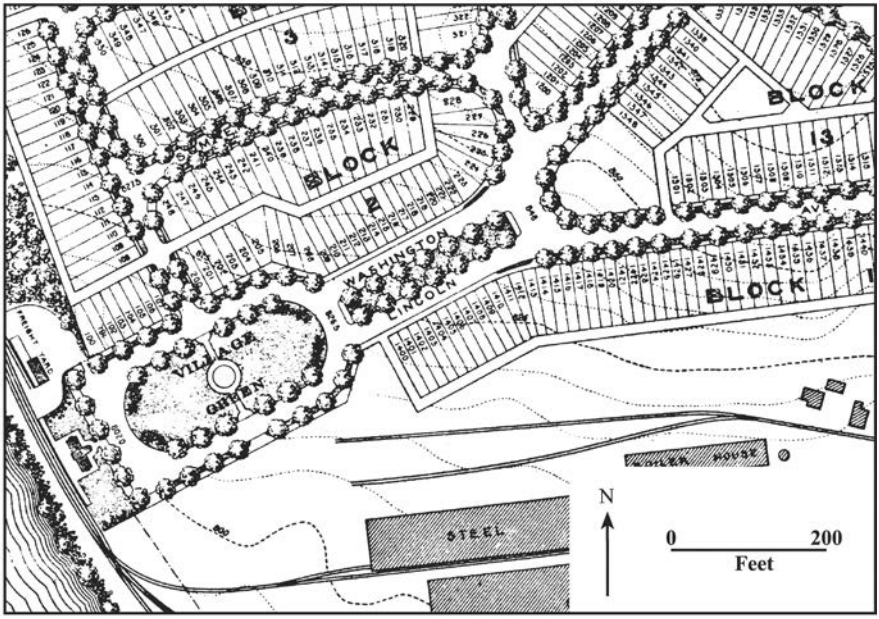

Fig. 3.2. Modified plan of the Village Green. From the lower left to upper right: the Kiskiminetas River, the WPRR, the Vandergrift station (flanked on either side by green space), the Village Green, the Washington-Lincoln park, and the town hall (the Casino Municipal Building) site. Had Olmsted and Eliot prevailed in their disagreement with McMurtry and the steel company over this part of the town plan, the railroad station would have been downriver on land shown as mill property, which, if one imagines a transecting axis, would have rotated the Casino (right) end of the axis to the upper center of the image. This would have placed the Casino in the heart of the present-day business district instead of at its edge. (Plan reproduced courtesy of the Division of Rare and Manuscript Collections, Cornell University Library, Ithaca, N.Y. Frederick Law Olmsted Architectural Drawings and Plans, file #462.)

designers confessed "that we feel very much dissatisfied with the plan as it stands." They urged McMurtry to try to convince the WPRR to adopt a different track plan. McMurtry either was unsuccessful or he ignored Olmsted's and Eliot's plea. The modified plan stood (fig. 3.2).[30]

After this incident, a rift grew between company and designers, with Apollo Iron and Steel becoming increasingly critical of the plan and its cost. In turn, Olmsted and Eliot were persistently disgruntled by the company's attitude. During several visits, John C. remarked in his work notes that his hosts talked disparagingly about the great expense of the entire venture. Apollo Iron and Steel's preoccupation with cost reflected the fact that the town of Vandergrift was for

them a business venture and not a philanthropic exercise. In order to recoup their more than $200,000 investment in the town, Apollo Iron and Steel shareholders insisted that the prices of the residential property in Vandergrift be affordable to steelworkers. The expense stemmed in part from the retention of the premier U.S. firm of landscape architects, but also from McMurtry's insistence that sewers, water mains, and gas lines be constructed before residential and commercial lots were sold. Although the directors recognized the possible benefits that would result from these expensive aspects of town planning and building, they nevertheless tried to cut construction costs by using local, and sometimes inferior, materials and less-than-competent employees.

Early in the planning process, Olmsted and Eliot warned Apollo Iron and Steel that they did not specialize in civil engineering. They recommended that to complement their expert surface design, the directors employ an equally expert engineer of national reputation to complete the subterranean improvements. However, James I. Buchanan, J. J. Vandergrift's personal secretary and fellow Apollo Iron and Steel board member, found a Pittsburgh civil engineer, R. G. Collins. Collins had worked with the Olmsteds when they designed the Chicago fairgrounds, and he mentioned this connection to Buchanan when trying to land the job. Collins's task would be to complete the topographic surveys, oversee the regrading of the property, design the "public improvements," and consult with the building contractors. His hiring was a choice the company later regretted. In May 1896, nearly a year after the ground breaking, McMurtry complained to Olmsted that Collins did unsatisfactory work and was "himself distasteful and uncooperative." Apollo Iron and Steel eventually fired Collins and replaced him with another local, but more competent, Pittsburgh firm—Wilkins & Davison. The new engineers spent six months trying to redo the faulty work of their predecessor.[31]

Apollo Iron and Steel was understandably intent on recouping their huge capital investment in the town, and therein lay the basis for another major modification of the Olmsted plan. A profitable real-estate venture depended upon the firm's ability to attract people and businesses to the new town. On the one hand, the directors hoped that employment opportunities in the steel mill would be all of the inducement needed for buyers. On the other hand, they knew that prices inflated by the costly design and improvements might keep some people away. In turn, Apollo Iron and Steel sought a balance between terms that were low enough to sell lots and high enough to cover the costs of development. The company's solution was twofold. First, to be competitive in the local real-estate mar-

ket while covering improvement costs, the company based the prices for lots "on the average sales in Apollo during the past five years." Residential lots would sell for twenty-five cents per square foot, commercial lots for seventy-five and eighty-five cents per square foot. Second, to ensure the sales needed to cover the rest of the improvements (as well as to make the venture profitable), the lot widths were reduced by one-half, from an average 50 by 120 feet to an average 25 by 120 feet. Accordingly, average lot prices dropped from $1,500 to $750. The concern for a successful real-estate venture thus took precedence over the concern for the morally uplifting advantages of a detached house on a spacious lot. Olmsted lamented that "with 25 ft. lots much rurality must go" and that "a large part of the value of our plan was destroyed by reducing lots from fifty to twenty-five feet frontage."[32]

Buyers did not seem to care that these changes had been made to the plan: nearly three hundred lots were sold when they were put on the market in June and July 1896. Six months later, McMurtry's secretary, Bache, and J. J. Vandergrift's secretary, Buchanan, remarked to Olmsted that McMurtry and Vandergrift were satisfied with the "state of the sheet." They told Olmsted that having sold almost two-thirds of the residential lots at the average price of $750, the company had nearly recouped the entire cost of the venture.[33] Numerous inquiries from prospective buyers nevertheless prompted some Apollo Iron and Steel directors to question why more lots were not available for purchase. Looking for answers, they focussed upon the curvilinear streets and the oddly shaped, oddly sized, and difficult-to-subdivide lots that had been created by the Olmsted and Eliot plan. Bache, apparently tired of being badgered on the subject, in turn wrote to the landscape architects and asked them to outline the "advantage accrueing [*sic*] to us from the town having been laid out on the curved plan instead of the square plan usually followed in this part of the country."[34]

Olmsted and Eliot had, by this time, seen two of the most important aspects of the design—the Village Green and the large lots—substantially modified to suit the economic requirements of the steel company. Obviously angered by questioning of a design feature for which the firm was famous, and possibly fearing that this too would be altered, the landscape designers testily replied that McMurtry already knew the advantages of curvilinear streets "as he doubtless employed us merely, if not solely, on account of our supposed skill in making such a plan." To comply with Bache's request, however, they continued: "It seems to us that the only answer that you need is, that a village laid out on such a plan (if well carried out in all details) would be more attractive and that, there-

fore, it will be easier to sell lots in it rapidly and at good prices tha[n] it would be if the streets were all straight."[35] Lots were selling within the curvilinear design when these letters were written, and it is unlikely that this aspect of the Olmsted and Eliot plan was ever in jeopardy. The issue of creating additional lots, however, lay at the heart of yet another conflict between the company and the designers.

The perceived shortage of lots prompted Apollo Iron and Steel to plan and sell lots in a second settlement platted on their property about one-half mile away from the southern edge of the Olmsted and Eliot plan (fig. 3.3). Known as "The Heights," it contrasted poorly when compared with the Olmsted plan. Instead of wide, curvilinear streets and irregularly shaped lots, the Heights plan mirrored Apollo and most steel towns in western Pennsylvania. The rectilinear street plan did not follow natural contours, and straight streets were run against the grade. Furthermore, the company planned to build only a water-supply system for the settlement. Sewers were not included. The expensive elements of the Olmsted and Eliot plan were abandoned at the Heights, but a greater number of lots affordable to lower-paid, semiskilled operatives were made available to interested buyers.

For the Olmsted firm, the criticism about the curvilinear street plan and lot shortage was the final blow to their deteriorating relationship with Apollo Iron and Steel. In May 1896, when McMurtry tried to pass the blame for the poor engineering of the town to the Olmsteds, John C. Olmsted remarked that he thought it was a ploy to rely less on the landscape firm: "Partly too he [McMurtry] may have felt that in the beginning he was green to this work but that now he knew enough about it to get along with the engineers' aid only." In December, John C. returned to Pittsburgh and to the town site in order to hasten the completion of the firm's end of the project.[36]

Overall, Olmsted and Eliot found their revised plan to be a "considerable disappointment." The Village Green was smaller and the symmetry was much less effective than what they had envisioned. The "amplitude of house sites" had been reduced and the resulting landscape looked much more crowded than intended (fig. 3.4). In presenting the final plan to Apollo Iron and Steel, John C. also worried that the firm would be associated with the rectilinear Heights plan. Writing to Bache he said "we have not thought it best to show upon our plan more than the edge of the subdivision known as Vandergrift Heights, since, owing to back grades and other defects, it is not a plan in which we wish to have it supposed we had a part."[37] Notably, the landscape firm insisted that on the final

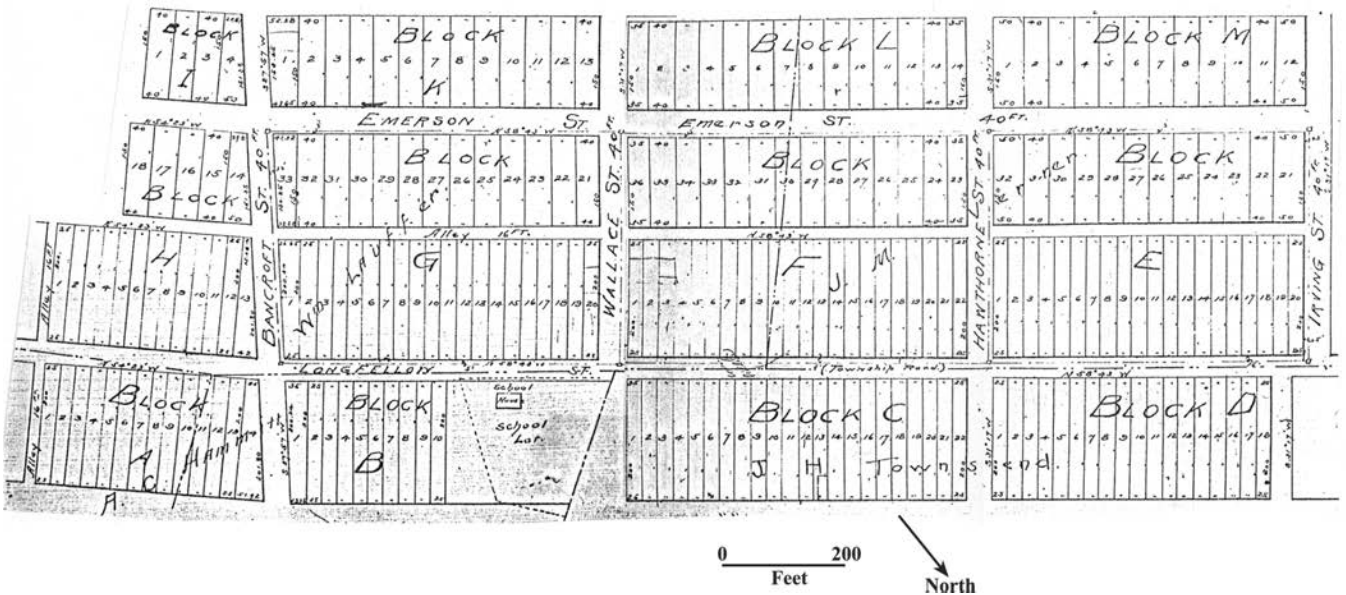

Fig. 3.3. Plan of Vandergrift Heights. (Westmoreland County Register of Plans, Book 1.)

Fig. 3.4. Detail from the modified Vandergrift town plan. Note the high density of lots northeast of the railroad cut that arcs across the right-hand side of the image. Compare with lot densities in figure 3.5. (Plan reproduced courtesy of the Division of Rare and Manuscript Collections, Cornell University Library, Ithaca, NY. Frederick Law Olmsted Architectural Drawings and Plans, file #462.)

Fig. 3.5. The landscape architects' face-saving "filler"—a Vandergrift residential landscape that never was. Notable are sizeable lots (compared with the area closer to the mill) and the exaggerated lobes within the street pattern. Note, too, the deliberate omission of the Vandergrift Heights grid. Contrast this plan with the street pattern in figure 6.1 that was created as part of Park and Realty plans in the late-1900s/early-1910s. (Plan reproduced courtesy of the Division of Rare and Manuscript Collections, Cornell University Library, Ithaca, N.Y. Frederick Law Olmsted Architectural Drawings and Plans, file #462.

copy of the plan, in a space that had to be filled, they be allowed to use a portion of their original design (fig. 3.5). In the space between the Heights and the lower portion of the town where Apollo Iron and Steel had required so many modifications, Olmsted drew in what he and Eliot had really wanted for both settlements: large residential lots sitting astride streets that meandered gracefully across the map as well as a ravine serving as the convenient path for a parkway and place where steelworkers could convene with nature. This part of the plan was never built, and in the late 1910s the area became a standard rectilinear grid. For most of the early twentieth century, residents and the steelmill used the ravine as a garbage dump.

Large differences can be seen on this rendering between the Olmsted firm's earliest plan and the final product, but for Apollo Iron and Steel the new settlements appeared to hit the spot. The final plan provided ample room for the mill site and a place to house workers. The social-reform aspects, infrastructure, and innovative features of the town's design were strong selling points and they reflected positively on the steel company.[38] By late 1896 the scheme was also proving to be a viable real-estate venture. But was it attracting the "right" kind of people? Would it live up to the social agenda that McMurtry developed after the Apollo strike and lockout? Would environmentalism and home ownership quell labor's desire to organize, especially during hard economic times? As it stood, it would be impossible for McMurtry and the company to answer these questions until the residents had moved in and started to create their social community.

CHAPTER FOUR

Settling the Vandergrift Peninsula

When Apollo Iron and Steel ran its first test of the new rolling equipment at the Vandergrift mill on October 29, 1895, the facility could not yet be classified as a fully integrated steelworks.[1] Its smelting equipment, consisting of three thirty-ton, open-hearth furnaces, would not be operational for another year. In the interim, warm steel ingots had to be transported three miles from the Apollo mill to Vandergrift via the Western Pennsylvania Rail Road. But it was not only materials that had to make the trip: workers, too, had to travel between Apollo and Vandergrift. The town of Apollo still possessed the only industrial workers' housing near the Vandergrift mill. Accordingly, some steelworkers rode from Apollo with the supply trains. Others walked, taking a shortcut along an abandoned WPRR rail cut that deposited them within yards of the new mill's gate.

The steelworkers who walked "the cut" to work during those first months could not easily have seen the progress that McMurtry, the Olmsted landscape firm, and a Pittsburgh engineer had made on the residential part of Vandergrift. They would have had to, and probably did, scale a steep, twenty-five foot, bramble-covered embankment to get even a glimpse. Of course, they knew all about the place. For months, McMurtry and Apollo Iron and Steel's managers

had told them that the new town would be "a creation, not a growth." McMurtry promised them that unlike Apollo (and every other 1890s southwestern Pennsylvania steel town), the new town would be clean, sanitary, well organized, well governed, and peaceful. No one would be allowed to purchase a lot or move there until the streets had been surveyed, the property graded to make way for a full system of sewers and water mains, and the parks planted with trees. By planning ahead and spending nearly $250,000 on the project before handing the place over to its residents, McMurtry believed that the town would be "better than the best" existing industrial settlement anywhere in the United States, let alone southwestern Pennsylvania.

Apollo Iron and Steel's activities and aspirations must have seemed extreme to Kiskiminetas Valley residents. In 1895, such a large, company-built industrial settlement where property would be sold to workers had never before been seen in this part of the country. Pittsburgh steel baron Andrew Carnegie had recently constructed residential tracts at Munhall, near the Homestead mill, but that project was not anywhere near as big as Apollo Iron and Steel's new town. Carnegie had (as Apollo Iron and Steel was to do) made mortgages available to workers, but he had not built a completely new steelworks at the same time. Nor had Carnegie intended for the settlement to house a steel mill's entire workforce.

Long-term Apollo residents must have wondered what implications the novel new town and mill would have for them and for the rest of the Kiskiminetas Valley. A new mill with state-of-the-art steelmaking equipment and greater production capacity might make the Apollo mill obsolete if additional investments were not made. Apollo workers who did not transfer their employment to Vandergrift would certainly lose their privileged status of working at the largest and most modern mill in the valley. Furthermore, a new town of fifteen hundred workers and their families (minimally six thousand people) located only one mile from Apollo—a town that boasted a population of about twenty-five hundred—might siphon business and people away from the older and smaller community.

Even the name that McMurtry had chosen for the town may have made Apollo residents question the company's motives.[2] J. J. Vandergrift was linked in the public mind to Standard Oil, a company epitomizing all that the American public feared about the unscrupulous behavior of "big business." Might the new town receive all of the advantages that seemingly unlimited—and unrestrained—capital could buy, to the detriment of Apollo's mill, business community, and population? To property buyers who planned to establish commercial businesses and manufacturing works, J. J. Vandergrift's association with the new

town nevertheless may have made the place seem a safer investment. Besides, McMurtry believed that Apollo Iron and Steel workers would be anxious to live in Vandergrift no matter what the place was called. The town's careful planning, construction, and marketing would make it the perfect industrial settlement.

Vandergrift, Pennsylvania, was far from perfect, however. As soon as property owners had bought their lots they began to subdivide them, ignoring both the Olmsted lot cadastre and suggested restricted covenants. They built boarding housing, alley housing, and rental housing; they erected spite fences, established "disorderly" houses, and used land for purposes other than what the Olmsted firm had envisioned. Two other settlements also emerged on the Vandergrift peninsula (the land framed to the northeast, northwest, and southwest by the Kiskiminetas River). As they grew, Vandergrift Heights and another adjacent residential settlement, Morning Sun (later called East Vandergrift), took on characteristics that mimicked Apollo. Their proximity to Vandergrift further sullied McMurtry's and Olmsted's original plans. Would these "imperfections" in and around Vandergrift undermine McMurtry's desire to maintain a loyal and productive nonunion workforce as well as his company's profit-making abilities?

"Vandergrift Ready": Promoting Vandergrift as a Utopian Steel Town

Even before the Vandergrift mill went into full production, McMurtry and his company felt that the place embodied everything they had wanted to do at their old mill site in Apollo. They did in fact declare the entire Vandergrift complex to be "model." In early 1896, the company submitted the floor plan, engineering diagrams of special equipment, and photographs of the mill and town to the iron-and-steel industry journal *Iron Age*. Accompanying these graphics were eight pages of text. The firm obviously wanted to show off their accomplishments.[3]

According to the *Iron Age* article, Apollo Iron and Steel had built the Vandergrift mill on a much larger scale than its older works in Apollo: there was more space, and room for expansion. Three long sheds housed steelmaking, sheet rolling, and finishing equipment (figs. 4.1 and 4.2). When the mill got into full operation, raw materials would enter at the northern doorway of the "steel plant," then be loaded by a Wellman electric charger into one of the three open-hearth furnaces. At the end of a heat, steel poured into ingot molds in the casting pit in front of the furnaces. Transferred by a crane that could carry "anything

anywhere" and "[set] it down as if it were eggs," ingots were sent to the stripper, dumped from their molds, and then placed in the heating pits. These pits, along with the rest of the mill's heating operation, were fired by natural gas that came from eight thousand acres of Apollo Iron and Steel gas land surrounding Vandergrift and Apollo.

After the ingots achieved a uniform temperature, they were conveyed to the blooming mills for the first pass through the rolls, then transferred to the next building, the "sheet mill" (fig. 4.3). This building, by mid-1897, housed two roll trains and twelve furnaces—four pair-heating and eight sheet-heating. The finished sheets that were rolled here were then transferred to a smaller annealing building for cooling.

When in full production in 1897, the total capacity of the new mill was 70,000 gross tons of ingots, 96,000 gross tons of sheet bars, 38,000 tons of black sheets and 51,000 tons of galvanized sheets. In 1899, the earliest year for which official employment figures are available, 1,750 people worked here—including three hundred men and boys under the age of twenty-one—making it the largest manufacturing employer in Westmoreland County.[4]

Early Apollo Iron and Steel notices like the one that appeared in *Iron Age* not only mentioned the company's steelmaking capabilities but also created an image for the actual town of Vandergrift. One of the margin-display summaries in Apollo Iron and Steel's main 1896 promotional brochure *Vandergrift Ready* captures the essence of this image: the town was a "golden opportunity"; investors and buyers "better not wait." Vandergrift would offer a higher quality of life to its inhabitants than any to be found in the countryside or in cities—and, specifically, Apollo. *Vandergrift Ready* told readers that anyone who bought property in Kiskiminetas Valley locations other than Vandergrift was acting imprudently. Comprehensively planned "public work"—sewers, water mains, paved roads, and electrical service—would make the difference between Vandergrift and any other community:

> It is a new thing to begin a town with all these public improvements. Usually they come, when they come at all, with the city charter, assessments, taxes, and politics, after at least some years of living in the mud and dust, with bad water and sickness, going about at night with lanterns, private houses and public buildings lighted by lamps, and dark streets—in a word, pioneering. Here you begin with more than any city's conveniences; all you have got to do is to buy your lot and build your house and you own your share of it all.

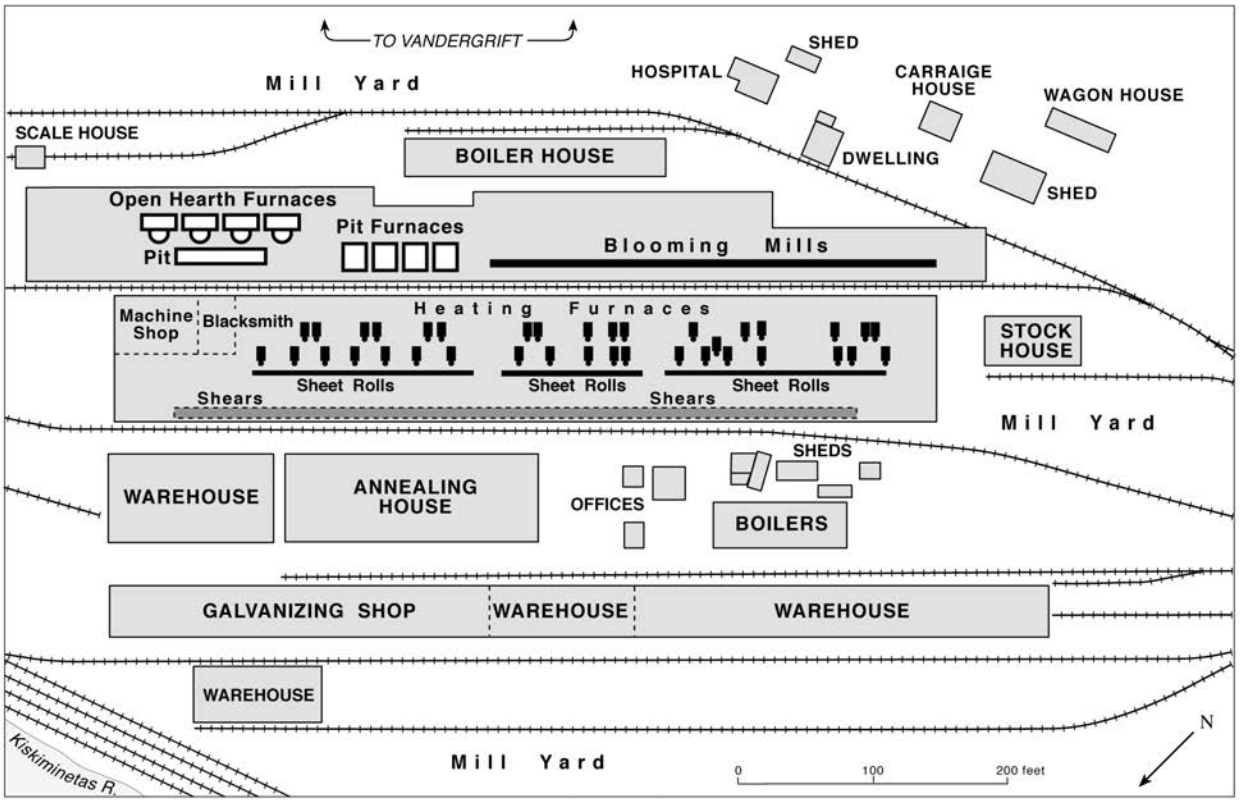

Fig. 4.1. Layout of the Vandergrift mill, 1899. (After a map by the Sanborn Map Company.)

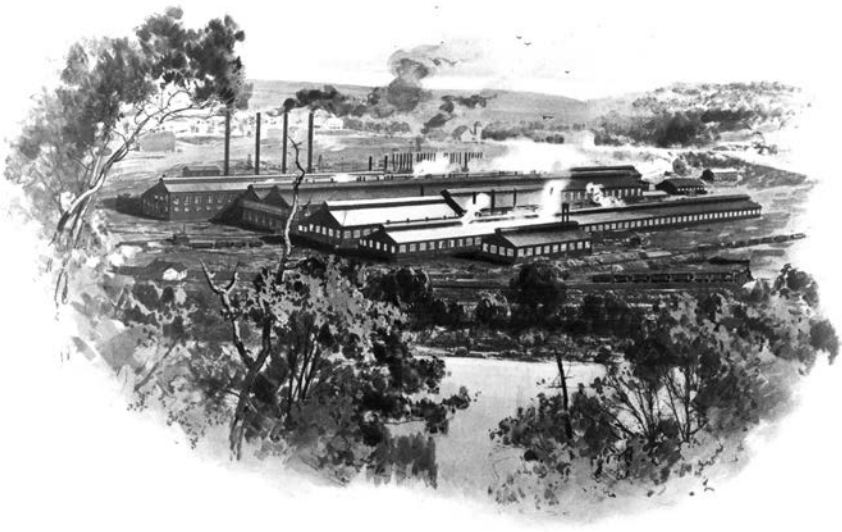

Fig. 4.2. The Vandergrift mill, 1901. Looking south from a bluff on the north side of the Kiskiminetas River, Vandergrift and Vandergrift Heights residential districts are just visible in the background. (From *Vandergrift: Its Homes and Industries.* Illustration reproduced courtesy of the Library of Congress, Washington, D.C.)

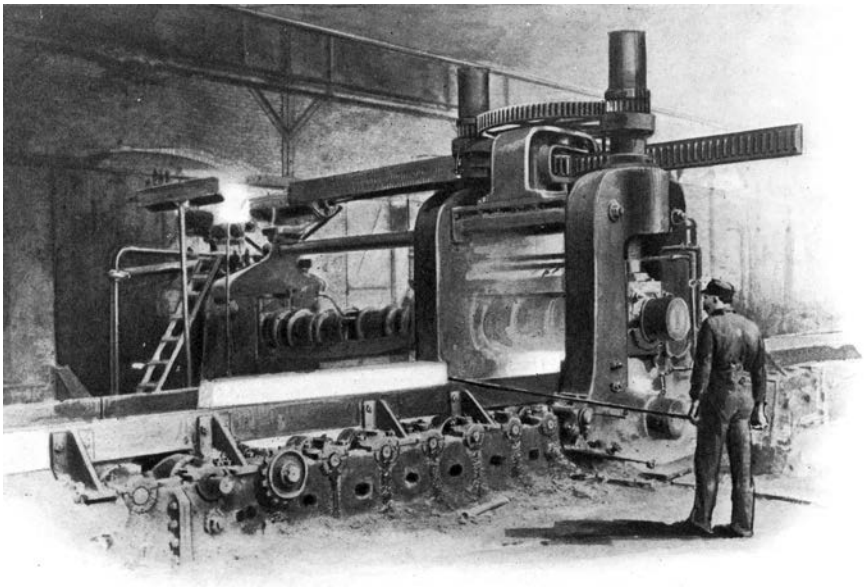

Fig. 4.3. Vandergrift blooming mill. The man, foreground, is presumably a catcher, a semiskilled worker. The person in charge of the mill, the roller, is hidden from view, although the stairs to his perch—the "pulpit"—are clearly visible. (From *Vandergrift: Its Homes and Industries.* Illustration reproduced courtesy of the Library of Congress, Washington, D.C.)

By the end of the summer of 1896—even before lots went on sale—the company believed that the town would have more public works, stores, and churches than "any existing town of ten-thousand inhabitants." Furthermore, Vandergrift would be a focal point for the surrounding countryside: "Farmers and others within the circle of attraction, on retiring from business, will come to live in it." According to *Vandergrift Ready*, the only advantage that an older town might offer to buyers was the size of its trees: "Of course ours are mere stubs—we have a fine woods near by, however."[5]

Not only would Vandergrift be attractive in terms of convenience and quality of life, it would also be an affordable economic investment. Apollo Iron and Steel argued that the number and variety of lots available ensured that initial lot prices would not be "ridiculous": in Apollo, "there has been a good deal of up and down in the sales of the past five years. Some lots have sold very low, and some very high. The extreme variation comes of circumstances that do not exist at Vandergrift." The firm added that it would try to protect the real-estate market from speculators, "but we must not refuse to sell two lots to a man who wants to pay for one with the rise of the other." Nevertheless, Apollo Iron and Steel made the following veiled statement that reserved its right to decide who could and could not buy lots: "Can sell if we want to." Owning property in Vandergrift, therefore, would be a privilege granted by Apollo Iron and Steel. Moreover, by limiting access to the property market the company had at its disposal means to keep known union sympathizers from residing in the town.[6]

Apollo Iron and Steel obviously realized that Apollo and Kiskiminetas Valley residents and some industrialists would view what it had created at Vandergrift as radical and in need of justification. *Vandergrift Ready*, therefore, presented candidly the company's motives. The brochure explained to potential buyers that one of Apollo Iron and Steel's main concerns was ensuring the "comfort and health of employees," which would ensure the viability of the new steelworks. Apollo Iron and Steel argued that the town of Apollo was no longer a tenable location for a steel mill because of space limitations. It also alluded to the unruliness of Apollo's unionized workforce. The company commented that "ten years ago—we inherited no good-will" when Volta Iron became Apollo Iron and Steel.[7] But despite the problems in Apollo, the company had been successful, said the brochure. Referring to an 1886 drawing of the Volta mill, it urged the reader to compare that image with a photograph of the Apollo mill in 1896: "To get our success subtract one picture from the other."

The Apollo success would be mimicked in Vandergrift—because of the su-

perior site, modern steelworks, and Apollo Iron and Steel's exceptional management capabilities: "All the more shall we grow, and Vandergrift with us." The company argued that all that was needed to bring the entire scheme to fruition were people: "We want good men, and have them; are going to want a good many. We know of no way to secure a steady supply of good men so sure, after giving them work and paying them well, as to help them a little; and no other help is so wise as providing the means of helping themselves." After outlining the benefits that the town would offer, the company's justifications for undertaking such a scheme, the terms of property sales, and the nature of Apollo Iron and Steel's past successes in Apollo and the iron and steel industry at large, *Vandergrift Ready* ended with a note about the difference between Apollo and Vandergrift. In the margins of the last two pages, the company displayed two slogans: "Apollo a growth"—"Vandergrift a creation." If one took the pamphlet at its word, how much more could anyone want?[8]

Vandergrift for Sale

During the first week of sales (June 8–14, 1896), Apollo Iron and Steel sold 276 lots, worth $275,013: or so the company stated in *Vandergrift Ready*. To handle these sales, in spring 1895 some of the directors of Apollo Iron and Steel formed a new company capitalized at $100,000—the Vandergrift Land and Improvement Company.[9] On June 12, 1896, all Apollo Iron and Steel property on the Vandergrift peninsula was turned over to the Vandergrift Land and Improvement Company.[10]

In the absence of steel and real-estate company records, it is difficult to say precisely how sales proceeded. Nor do records exist to tell us about the methods by which property owners contracted to have their homes built. (I talked to people in Vandergrift, but no one seemed to know, except to say that "my [father, grandparent, uncle, etc.] had the house built.") The extant housing stock suggests, however, that Vandergrift buyers had complete freedom to decide what kind of house they would have built. Some dwellings were fanciful, late-Victorian experiments in cupola, turret, and wrap-around porch building. Others, particularly houses built along Vandergrift's back alleys, were crude—not much better than shanties. Some of the primary written material that remains, advertising in particular, may have intentionally distorted the real-estate sales situation. Given the company's skepticism about the venture during dealings with the Olmsted firm, it would not have been surprising if Vandergrift Land

and Improvement tried to make sales look brisk so as not to scare off potential buyers of lots.[11]

The deeds issued to first-day buyers conveyed surface rights to the new lot holders but reserved mineral rights to the company. Each deed included a single restrictive covenant (as noted above, the scheme for twenty-nine covenants, suggested by the Olmsted firm, was not adopted): it prohibited the manufacture or sale of alcohol on conveyed property. Signed by McMurtry in his capacity as vice president of the Vandergrift Land and Improvement (VL&I) Company, the deeds were witnessed by the secretary, James I. Buchanan.

The cost of residential lots appears to have adhered to the company's advertised and promised average price of $750, although prices varied according to lot size. On streets nearer the mill, Farragut and Columbia Avenues, lots were closer to the 25-by-150-foot size and the $750 average price. Away from the mill, on Grant and Washington Avenues, the size of residential lots increased, as did cost. Washington Avenue came closest to what the Olmsted firm had envisioned for the entire town in terms of street width (80 feet) and lot size. The price of lots there averaged $1,371. Commercial lots, located along lower Washington and Grant (i.e., nearer the mill), averaged $2,164.

Apollo Iron and Steel made it no secret, even in its advertising, that loyal mill employees were given first chance at buying these lots. Deeds indicate that 138 of the 152 first-day buyers were from Apollo. Tax-assessment records from Apollo show that, of this 138, before the 1893 Apollo lockout at least twelve were laborers. By 1896, when these twelve purchased Vandergrift property, each had positions as heaters, mill clerks, and rollers, indicating that they were probably part of the replacement workforce that had been fast-tracked through the mill hierarchy during the Apollo lockout. An additional nine buyers had been replacement rollers, while three other rollers were probably part of the handful of rollers who remained loyal to McMurtry.[12]

According to the U.S. federal manuscript census, 90 out of the 152 first-day buyers still lived in Vandergrift in 1900. As a group, they displayed the following occupational characteristics: nearly one-half were skilled workers employed as rollers, pipe fitters, machinists, locomotive engineers, boilermakers, and millwrights. Sixteen operatives held jobs as sheet heaters or pair heaters. Five of the individuals who self-identified as either a manager, official, or proprietor worked as superintendents at Apollo Iron and Steel (seven others in this category were merchants). All three clerical and service workers were employed in the mill as shipping clerks. In all but one instance, unskilled laborers who were first-day

Table 4.1. Number and Percentage of Employed Household Heads Owning Homes in Vandergrift, by Occupation, 1900

	Owners		Total Number of Household Heads[1]
	Number	%	
Managers	30	15	69
Service workers	23	11	52
Craftsmen	70	35	117
Operatives	65	32	120
Laborers	14	7	45
Totals of owners and household heads[2]	202		403

1. 201 Vandergrift household heads rented their accommodations.
2. Only household heads who were identifiable by occupation and housing-tenure status are included in this table.

buyers either lived in households where another family member held a skilled or clerical position at the mill or they were more than fifty years of age, which meant that they probably held another occupation before 1900. In general, this occupational distribution mimics the overall occupational structure in 1900 of those Vandergrift residents who owned their housing accommodation (table 4.1).

From analysis of the deeds filed at the Westmoreland County courthouse in Greensburg, I believe that Vandergrift Land and Improvement directed early buyers to certain parts of the town (fig. 4.4). By the end of 1896, two full blocks were almost sold out and four others were nearly half-filled. It is possible that the company had not finished the infrastructure that serviced other blocks, which would have limited the number of lots from which to choose. Another possibility is that it was as historical geographer Deryck Holdsworth found in his study of late-nineteenth-century real-estate development in Vancouver, British Columbia: the company may have wanted the map of lot sales to reflect a healthy real-estate market, and large, contiguous chunks of sold property convey a stronger message than a pattern of scattered lots.[13]

Within Vandergrift's available blocks, older craftsmen, clerical workers, and some of the superintendents bought expensive residential property away from the mill along upper Washington and upper Grant Avenues. For example, William Watson, a forty-one-year-old pipe fitter, purchased one and one-half lots along Grant Avenue for $1,020. According to the 1900 tax-assessment records, the house he had built on this property was worth $1,730 (and was mort-

Fig. 4.4. Initial sales map of Vandergrift lots. First-day buyers who made purchases along Washington and Grant Avenue erected, for the most part, two- and three-story commercial buildings, the upper floors of which were usually used as residential apartments. A small business district also emerged on Columbia Avenue. (Data: Westmoreland County Deed Register, 1896–1899.)

gaged). The majority of younger craftsmen (rollers) and operatives (heaters) purchased lots along Farragut and Columbia Avenues, as exemplified by twenty-nine-year-old Miller D. Grimm, who bought his Columbia Avenue lot for $896. His mortgaged house was worth $1,604.

Merchants bought commercial property closer to the mill along lower Washington and lower Grant. A case in point was that of George Hunger, a thirty-eight-year-old hardware merchant from Leechburg, who bought two of the commercial lots across from the Village Green on Washington Avenue for $3,560. The value of the lots and the building from which he conducted his business (which included house contracting) in 1900 was $7,500. The pattern linking location to occupation was not universal, however. For example, rollers Joseph T. Daugherty, Ardesco Bright Cochran, and John Johnston bought expensive ($938 to $973) Grant Avenue residential lots that they later developed for commercial use. Daugherty and Johnston lived in the buildings they erected on these lots and rented space to businesses and other households.[14] Cochran chose to live on Hamilton Avenue, holding onto his Grant Avenue property as an investment. Each of these buyers not only exercised his individual right as a property owner to do what he wanted with his lot, even if it went against the original land-use ideal of keeping commerce and residence confined to certain streets, but also received long-term, tangible rewards from his purchase. What makes Daugherty, Cochran, and Johnston especially interesting is that, according to the longitudinal trace of Apollo rollers and laborers between 1892 and 1896, all three men were replacement rollers during the Apollo lockout. Perhaps McMurtry gave them the opportunity to purchase these lots as an extra reward.[15]

After the first day of sales, infilling of the other blocks began. Sixteen additional lots were sold in 1896, forty-five in 1897, and seventy in 1898. Most of the later buyers were residents of Apollo and the local area. Fourteen of those who bought property were from Pittsburgh, none of them ever lived in the town, and at least six owned more than one lot.[16] Pittsburghers clearly purchased Vandergrift property as an investment, a few providing rental housing on a large scale. In 1900, Apollo Iron and Steel board member Joshua Rhodes, Bache (McMurtry's secretary), and the Vandergrift Estate (whose executor was Buchanan, the VL&I secretary), all of them based in Pittsburgh, owned 24 percent of all lots that had been sold by the Vandergrift Land and Improvement Company.[17] Their holdings were confined to three streets: Sumner, Sherman, and Farragut. The forty-eight identical, three-story, frame single houses and thirteen double houses

Fig. 4.5. View showing residential architectural styles in Vandergrift. (From *Vandergrift: Its Homes and Industries.* Illustration reproduced courtesy of the Library of Congress, Washington, D.C.)

built on these lots contrasted directly with the personalized architecture of the private homes that were being built along Columbia, Grant, and Washington Avenues (fig. 4.5).

Although the Apollo Iron and Steel Company and its successors were never listed as the owners in the Westmoreland County property records and tax-assessment records, a case can be made that, because Apollo Iron and Steel board members owned them, the Sumner-Sherman-Farragut rows were company houses. But even were such a designation to be applied to them, they were not the raw company houses seen in coal patches and mill towns throughout the industrial Northeast—the kind portrayed in books such as Margaret Byington's (1910) *Homestead: The Households of a Mill Town.*[18] Each dwelling had running water, sewer connections, and electricity. And living densities were no higher than along any other Vandergrift street. According to the 1900 census, these houses were rented by lower-paid clerks and less-skilled operatives who could not afford to purchase Vandergrift property but who were essential to the company. In fact, the majority of clerks who were household heads and who lived in Vandergrift lived in rental accommodation. Among other occupants of the Sumner-Farragut-Sherman houses were merchants, which suggests that this rental

housing may have been part of an incentive to have businesses open in Vandergrift.

Despite the positive light that dwellings like this shed upon the idea of the company house, McMurtry had nevertheless gone against his initial intentions and advertisements. The company, albeit through individual members, had become involved in the provision of worker's housing. To be fair to McMurtry and the company, however, it must be stated that, according to 1900 tax-assessment records, resident property owners in Vandergrift were themselves providing rental housing. Roller Joseph McMullen, for instance, owned three rental houses on one and one-half lots on Franklin.[19] John Detar, a sheet heater who lived on Grant Avenue, erected a second house on the alley in the back of his lot and rented it to a pair heater and his family.[20] Indeed, of all house occupants, nearly as many households rented as owned. Thus it is apparent that one of McMurtry's ideals—that Vandergrift would be a haven of home ownership—came to exist in ways that were different than those that the company's advertisements and the Olmsted correspondence had predicted. A growing, thriving mill town with a real-estate market could not develop without a rental house market. Given the emphasis that Apollo Iron and Steel had placed on private property ownership, as well as the potential return on rental property, the demand for housing by segments of the population who could not afford to own shelter, and the inability of some owners to sell property when they left town, it seems that rental property was an inevitability in Vandergrift.

The First Households and Early Community Life

In 1900, four years after the Vandergrift Land and Improvement Company first began to sell property in the model town, Vandergrift was populated by families who could either afford to buy, make mortgage payments, or rent property valued on average at $2,250 ($750 for the lot and at least $1,500 for the house). In general, individuals at the high end of the occupational structure headed these households (table 4.2).

Focusing on household heads, however, masks much of the social complexity that developed in Vandergrift during those early years. The average household consisted of five people—all Pennsylvania-born, and four of them nuclear-family members: father, mother, and two children. The fifth person was usually a boarder (taking meals), lodger, or a servant over the age of sixteen. Two people, typically the household head and the unrelated person, were employed. A

Table 4.2. Occupational Structure of Apollo, Vandergrift, Vandergrift Heights, and Morning Sun (East Vandergrift), 1900

Occupation	Apollo %	Vandergrift %	Vandergrift Heights %	Morning Sun %
Managers[1]	14	10	5	4
Service[2]	18	18	7	6
Craftsworkers	19	21	19	16
Operatives	20	39	45	25
Laborers	30	12	24	46
Farmers	trace	0	trace	3
Total number employed	985	901	673	247
% of town population employed outside the home	34	43	35	40

1. Includes officials, proprietors, and professionals.
2. Includes clerical, sales, and service workers.
Source: U.S. Department of Commerce, Bureau of the Census, *Twelfth Census, 1900: Population Manuscripts*, Pennslyvania, Armstrong County, Westmoreland County.

typical household head was a craftsman (a roller) or a highly paid operative (a heater); the unrelated person would typically be a lower-paid operative (a rougher or matcher, perhaps) or a female servant.[21]

Notably, not one married woman in Vandergrift was listed in the 1900 census as working outside the home. Older children worked, however—daughters included. Rollers' and heaters' sons worked in the mill as laborers, openers, bundlers, matchers, catchers, roughers, or clerks or in Vandergrift businesses as sales clerks. Unmarried daughters in their late teens and early twenties often lived at home but worked as schoolteachers, milliners, seamstresses, telephone operators, or sales clerks. Married women worked inside the home, at childbearing, child rearing, and managing the household (and sometimes managing a servant.)[22]

The portrait that emerges from census data of the average household suggests that the "traditional" nuclear family with a servant was the dominant social unit at Vandergrift. Some households, however, differed from the norm.[23] Younger brothers, sisters, cousins, and other extended family members (some presumably fresh from the family farm or home in Apollo) boarded with several Vandergrift households while they went to school in town or worked in a first

job at the mill. At least fifteen households were boardinghouses in which the number of boarders exceeded the number of related people. There were boardinghouses on Jefferson, Sumner, Farragut, Hamilton, Sherman, and Franklin Avenues.[24]

The household of Emil Bischoff, a German-born paperhanger who bought his Jefferson Avenue property on the first day of sales, typified Vandergrift's boardinghouses in terms of size and the ethnic and occupational composition of boarders. Seven boarders (all Pennsylvania-born men)—a rougher, a catcher, a bundler, two matchers, a shearman, and a laborer—lived with Bischoff, his wife, and their granddaughter. Undoubtedly, the task of looking after the boarders and the house fell on Bischoff's wife and granddaughter. The granddaughter's occupation was listed in the census as live-in servant. Similar to other Vandergrift households who ran boardinghouses, taking in boarders was apparently a supplementary business, in addition to the regular job held by the household head and other family members. Bischoff stands out from other boardinghouse owners, however, because of the location of his two-story frame dwelling on Jefferson Avenue—a street occupied mainly by nuclear families. Bischoff also differed in that he was one of two boardinghouse operators who owned his property by means of a mortgage. Eleven boardinghouses were rented accommodations, nine of which were owned by Apollo Iron and Steel Company directors. Only one boardinghouse was owned freehold. Perhaps Bischoff and the others used the extra income generated by boarders as a means of meeting mortgage and rental payments. Such arrangements were typical in Pennsylvania's industrial and ethnic communities.[25]

The presence of boarders, lodgers, and servants added diversity to the social structure of Vandergrift, as did the local dispersal of families to several housing units as children grew up, married, and set up their own households. Property deeds and tax-assessment records show that during the initial rounds of sales, fathers, sons, and brothers sometimes bought adjacent properties. For example, a mill foreman, forty-eight-year-old James S. McKim, bought a lot on Jefferson Avenue; his twenty-six-year-old son, roller John McKim, bought the lot next door. But there were many cases where family members chose not to live near each other. Swedish-born mill superintendent Oscar Lindquist and his younger brother, machinist Otto Lindquist, purchased lots two blocks apart. Millwright Levi Stitt purchased property on Franklin Avenue; his brother, roller Adam Stitt, bought one and one-half lots on Washington Avenue. (Another brother,

Thomas Stitt—younger than Levi and Adam—moved to Vandergrift and worked in the mill for seven years, after which he returned to the family farm in Parks Township to look after his aging mother.)[26]

The Stitts were one of several Vandergrift families who maintained ties to the Kiskiminetas Valley countryside, younger family members moving back and forth between farms and town. One family, the Welshes, fulfilled Apollo Iron and Steel's prediction that local farmers would, upon their retirement, follow other family members to Vandergrift. At the age of fifty-one, Allegheny Township farmer William Welsh moved to Vandergrift to join his son, E. H. Welsh—printer, newspaper editor, and the town council secretary.[27] Thus in 1900 ties between Vandergrift, the countryside, and Apollo largely reflected the Pennsylvanian and American character of the town. Like the iron towns, canal towns, and rural townships that surrounded it, Vandergrift had a population that was overwhelmingly American. Of the employed Vandergrift residents, 92 percent were born in the United States, suggesting that McMurtry's agenda for creating an "American community" had come to fruition (it must be pointed out, however, that in neighboring Apollo, a similar percentage of the employed population [94%] was U.S.-born). Furthermore, the few in Vandergrift who were foreign born were Canadians and Northwest Europeans (the Lindquist brothers, for example). Holding skilled positions in the mill workforce, they spoke English as their first language, and had U.S. citizenship.

Good citizenship and "pride of country" played a role in the social life of the community that went far beyond the patriotic names that McMurtry had given Vandergrift streets and the formal oaths of allegiance that new citizens pledged in return for naturalization papers. During the first four years of the town's existence, the Fourth of July was *the* major community celebration (fig. 4.6). McMurtry closed the mill for the day, the town council invited workers from other sheet mills in the Kiskiminetas Valley to attend the festivities, and "the village band discourse[d] music on the green, [and led] the patriotic spirits of the times."[28]

Planning the Independence Day celebration and outfitting the village band were special business items on the agenda of the town council after the incorporation of Vandergrift Borough on May 15, 1897. However, such items were few and far between: once the council had organized building, fire, street, and police committees, set the tax levy, awarded garbage-removal and street-sweeping contracts, and hired a constable and a policeman, they had little to discuss during their first two years of meetings, held bimonthly. Because the Van-

Fig. 4.6. Fourth of July celebration. (From *Vandergrift: Its Homes and Industries.* Illustration reproduced courtesy of the Library of Congress, Washington, D.C.)

dergrift Land and Improvement Company still owned most of the property within the town—unsold lots and public spaces included—the council dealt with relatively trivial concerns such as passing and enforcing an ordinance requiring dog licenses.[29] The meeting minutes indicate that the council referred all substantial public matters to McMurtry and Apollo Iron and Steel. In 1898, for instance, the council approached McMurtry about providing two types of infrastructure that had not been included in the original plan: a firehouse and a cemetery. The council would take responsibility for operating and maintaining both. McMurtry came through in both instances. Such infrastructural facilities undoubtedly enhanced Vandergrift's desirability as a real-estate investment. Municipal fire protection was also good for Apollo Iron and Steel; the mill would be more likely to survive in the event of a fire, and having a borough fire service reduced the company's own outlays by placing ongoing costs of fire protection upon residents. In 1897 he had already donated two hose carts to the town, and in honor of this gesture, the volunteer fire department named itself the George G. McMurtry Fire Department No. 1.[30]

Satisfying the council made good business sense to McMurtry in yet another way. Residents elected several of McMurtry's skilled workers to the town council during the early years. Of the six members of the first council whose occupations could be found in the 1900 census, all but one were craftsmen.[31] If McMurtry maintained good relations with the council, he had yet another way of maintaining good relations with rolling crews and workers in the sheet mill. McMurtry might then be able to call upon their loyalty to the mill during periods of crisis.

Promoting worker loyalty may also have underpinned McMurtry's practice of providing a free lot and $7,500 to any major church denomination that wanted to establish a congregation in Vandergrift. (Church officials praised McMurtry for his generosity.) According to the 1899 Sanborn Fire Insurance Company map of the town, Methodist, Episcopal, and Presbyterian churches had been built of brick and stone on expensive, highly visible corner lots. By 1903, Lutheran, [Dutch] Reformed, Roman Catholic, and a second Presbyterian congregation had built churches in the borough. Their presence lent an air of permanence and stability to a town where entire paved streets lacked houses and where scores of buildings were in various stages of construction.[32] If they were typical of the 1890s and 1900s, and there is no reason to believe that they were not, the ministers and priests of these churches preached messages that were intended to make listeners into citizens as solid as the church buildings. On Sundays, rollers, heaters, merchants, roughers, catchers, matchers, scrap boys, and servants heard sermons that extolled the virtues of patriotism and the importance of the American work ethic. In short, good workers made good Americans, good Christians, and good citizens. Workplace efficiency would be rewarded in the home, community, and the hereafter.

The ethnic character of the valley was changing, however. Immigrants from Central, East, and South Europe flocked to steel mills, including the Vandergrift works. Nevertheless, McMurtry's model industrial town was relatively unaffected by immigration in 1900. According to the list of deeds filed at the county courthouse, not even one person from Central, East, or South Europe bought Vandergrift property from the Vandergrift Land and Improvement Company between 1896 and 1915, which suggests that the company chose not to sell to immigrants. Even if immigrants who were not from Northwest Europe had been allowed to buy property in Vandergrift, they could probably not afford to do so—neither to buy a lot nor build, nor even to rent a house; but neither could lower-paid, U.S.-born operatives and laborers.[33]

In June 1896, around the time when Bache asked the Olmsted firm about the advantages of curvilinear streets, McMurtry and the company recognized a major imperfection in the Vandergrift plan. Apart from heaters and older men among the day laborers, operatives and unskilled workers were not buying into the Vandergrift plan in large numbers. Given their lower wages, matchers, catchers, teamsters, and laborers were able to live in Vandergrift only if they lived with their parents or boarded with other families. For married operatives and laborers, such housing alternatives were undesirable. Furthermore, Vandergrift rollers and heaters were young: their children were not old enough to work in the mill; nor would the children have been in sufficient supply to meet the company's requirements for laborers even if they were older.

Apollo Iron and Steel faced a choice: provide housing for lower-paid workers to a greater extent than it originally anticipated or reduce the cost of property by selling lots that were even smaller than 25 by 120 feet. The lots had already been reduced from the Olmsted firm's suggested size of 50 by 120 feet, and further reductions in lot size and price would utterly defeat the purpose of the Olmsted plan. While the company's directors eventually provided some housing on Sumner, Farragut, and Sherman, the company itself was unwilling to sell smaller and cheaper lots—not, at least, within the Vandergrift plan. Instead, Apollo Iron and Steel created an alternative—a less-expensive settlement nearly a mile away from the southern edge of Vandergrift: Vandergrift Heights.

Vandergrift Heights

Building a large-scale residential district to ensure property ownership for lower-paid mill workers required that McMurtry and the Vandergrift Land and Improvement Company cut planning, advertising, and infrastructure costs as much as possible. Absent from the Vandergrift Heights plan were all of the critical (and costly) design aspects that had made Vandergrift "a creation." There was no "village green" and no curvilinear street plan, water mains, or sewers. A gridiron lattice of streets that ignored the irregularities of the local topography was simply etched into the steep hillside site to frame thirteen blocks. Absent, too, was the boosterish tone of the expensive advertising brochure that had beckoned investors to Vandergrift. In 1897, the Vandergrift Land and Improvement Company merely mentioned in the *Apollo Herald* that "good lots" were available for $150 (or five dollars down and five dollars a month) in a "high location." Instead of devoting print to selling lots in Vandergrift Heights, the company placed

most of the advertising emphasis on selling lots in Vandergrift. At $150 per lot, they did not stand to receive as much direct financial return from the Heights as from the Olmsted plan.[34] But the lack of special planning, infrastructure, and advertising should not be interpreted as a lack of concern for how the Heights developed. The initial survey was for only 226 lots (compared with 814 created in Vandergrift). As their later actions suggest, the company had learned that it was better to start with a smaller plan and then make additions if more lots were demanded. Because of the smaller number of lots (and the fact that there was no infrastructure to wait for), it was unnecessary to direct buyers to certain lots. Thus the Vandergrift Land and Improvement Company was able to simplify marketing strategies for the Heights.

Simplifications were offset by tensions inherent in the idea of Vandergrift Heights. The terms of sale were so reasonable that nearly anyone could afford to buy property in the town. If allowed to, land speculators could easily buy large tracts of land, with immigrants filling in the gaps. Thus the task for the Vandergrift Land and Improvement Company became a complex one: ensure lot sales in the Heights to the "right" type of buyer, while protecting property values in Vandergrift from the negative spillover effects of urban growth and an immigrant population. In an attempt to prohibit land speculators from participating in the Vandergrift Heights real-estate market, the company extended its two lots-per-buyer policy to the Heights. On the first day of sales, December 24, 1896, 91 of the 226 available lots were sold to 84 individuals for a total of $13,746. Only seven buyers purchased more than one lot. No buyer purchased more than two lots, and none was from Pittsburgh, suggesting that for McMurtry's friends Vandergrift was a better investment because of the benefits of the Olmsted plan and the proximity of the mill. Furthermore, Pittsburgh investors may simply have been disinterested in making further financial commitments to the scheme. For the first three years of the town's existence, large-scale speculation did not exist in Vandergrift Heights.[35]

For Vandergrift Heights first-day buyers, two sizes of lots were available (see fig. 3.3). Lots along Longfellow Street were 25 by 200 feet; lots along Emerson were 40 by 150 feet. Surprisingly, both sizes of lot were priced the same; despite a thousand-square-foot difference between Emerson Street lots and Longfellow Street lots, most sold for $150. The exceptions were sixty-four lots on the northern edge of the plan in blocks A through D. These lots, 25 by 200 feet, sold for $200, presumably with the private understanding that they were to be used for commercial purposes because of their location. They were closest to Vandergrift

and, for steelworkers, would be on the route between home and mill. Moreover, if Vandergrift and Vandergrift Heights were successful, the vacant ground between the two settlements eventually would be filled with houses and the Longfellow lots would occupy a central location. A business district developed along Longfellow, but it flanked both sides of the street, locating on $150 lots as well as $200 lots. As in Vandergrift, lot prices did not always influence future land use.[36]

That it was individuals who purchased the majority of single lots ensured that Vandergrift Heights would develop as a settlement of many home owners. By 1900, 69 percent of Vandergrift Heights households owned their accommodation. This aggregate statistic, along with the absence of Pittsburgh investors in 1897, nevertheless masks the fact that individuals from nearby places such as Apollo, Hyde Park, Paulton, and Leechburg speculated on Vandergrift Heights property. Several bought single lots on the first day of sales with no intention of moving to the Heights. Forty of the first-day buyers lived elsewhere in 1900. An example is John Buzzard, a twenty-eight-year-old Apollo roller, who bought a $200 lot in block D on Longfellow Avenue and on it erected a two-story rental house, valued in 1900 at $560. Buzzard, however, stayed in Apollo. Farmer James Culp, of Spring Church, in Kiskiminetas Township, and his son, a twenty-five-year-old melter, Harry Culp, purchased three adjacent lots in block C on Longfellow Street. They built three houses: Harry lived in one of them and rented the other two. The father moved to Vandergrift.

Between Christmas Day, 1896, and the following May, thirty-nine additional lots were sold, taking the total number of lots sold to one hundred. On May 22, 1897, VL&I filed a plan for a new addition for the Heights that made 322 more lots available. Unlike the older section of the Heights, however, these lots were a uniform 40 by 100 feet; according to the deed register, the majority sold for $150.[37]

McMurtry and VL&I may have recognized that they were being far too generous in selling large lots for such a low price, and this could account for the differences between the lot sizes and price structures of the two portions of the Vandergrift Heights plan. Generosity, however, may in fact have been their aim; the large lots in the initial Vandergrift Heights plan may have been viewed as a reward for the unskilled and semiskilled workers who were loyal to McMurtry during the Apollo lockout. At least nine replacement workers from Apollo purchased property on the first day of sales in Vandergrift Heights. It is also conceivable that some of the buyers, such as thirty-one-year-old mill clerk John

Paterson, of Paulton, and thirty-six-year-old carpenter Linus Taylor, of the nearby village of Oklahoma, were the "farmboy" replacements that Apollo union members so despised in 1893.

Clearly, with each round of sales in Vandergrift and Vandergrift Heights, VL&I modified its policies and made adjustments to ensure a certain mix of workers as well as a successful real-estate venture. Vandergrift Heights was the result of such an adjustment. For the first year of sales, however, one policy—an unwritten one—ensured the initial success of both Vandergrift Heights and Vandergrift as American communities. Despite the fact that McMurtry had mentioned to Olmsted, Olmsted & Eliot that some Apollo Iron and Steel workers were "Russians, Poles and Negroes," not a single lot in either settlement was transferred from the Vandergrift Land and Improvement Company to a buyer born in East or South Europe.[38] The rules changed, however, for a second Vandergrift Heights addition when it opened for sales on June 21, 1897. German Pole Nicholas Humartus purchased a lot in block I, on Lowell and Italian immigrants Frank Rossi and Giuseppi Bucci purchased adjacent lots in block L on Lowell. By 1910, the houses that Rossi and Bucci built had become the seeds of an Italian enclave that developed along Lowell Avenue. Poles, Lithuanians, Slovaks, Hungarians, and other Eastern Europeans later purchased property in Vandergrift Heights, too; they did not, however, buy their lots adjacent to each other.

But in 1900, Vandergrift Heights was nearly as American and Northwest European as Vandergrift: 93 percent of employed Heights residents were born in the United States, Canada, or Northwest Europe,[39] and as houses were built and people moved into the Heights, other similarities between the upper settlement and Vandergrift Borough began to emerge. Most of these similarities were in terms of household structure and can be explained by the fact that both Vandergrift and Vandergrift Heights residents were pulled largely from the same Apollo source population. There was little age difference between the two sets of first-day buyers who eventually moved in; both sets were in their early thirties. A further similarity was that, on the average, five people lived in a 1900 Vandergrift Heights household, and two of the five worked. There were differences, however, in terms of the occupations of the two employed household members. The typical household head in the Heights was a lesser-paid operative—a rougher, catcher, or matcher—and the other employed person was often another operative or a day laborer. Craftsmen dominated the occupational structure in the Olmsted plan; operatives dominated in Vandergrift Heights. In a population

that was almost the same size as that of Vandergrift, in the Heights there were fewer professionals, managers, clerical workers, heaters, rollers, engineers, and other craftsworkers.[40]

Differences in the occupational structures of the Heights and the borough reflected two sets of conditions. First there was what amounted to differences in the "admittance cost" to both towns. Lots were cheaper in Vandergrift Heights: the terms of purchase were easier for lesser-paid workers to meet; and—presumably—rent was cheaper for those who did not own their accommodation. During the first year of sales, Vandergrift Heights lots cost three cents per square foot, whereas Vandergrift residential lots, on average, cost twenty cents per square foot. The second set of conditions relates to personal choice. Nearly any worker born in the United States or Northwest Europe could afford to buy property in Vandergrift Heights; higher-paid craftsmen and professionals, however, opted to go to the best environment that they could afford—the borough—even if it meant that they had to take in boarders, obtain a mortgage, or pay higher rents to make this move.

Within the first four years of occupancy, another difference in household structure emerged between the two settlements: Unlike in Vandergrift, all five people living in a typical Vandergrift Heights household were related. Single boarders residing in a household were rare, suggesting that the Vandergrift Heights households did not need additional household income that came from "room and board" to meet monthly mortgage payments. Although more Vandergrift Heights buyers entered the property market by obtaining a mortgage, compared with Vandergrift the average cost of a house in the Heights ($600) and the mortgage terms were more affordable. Single male operatives at Apollo Iron and Steel who made up the boardinghouse population could also make the same basic choice as property buyers and move to the best affordable environment: Vandergrift. If families in the modern, sanitary, and uplifting Olmsted plan were willing to take in boarders for a reasonable charge, why not live in more comfortable conditions? There may have been, therefore, diminished demands for boarding and fewer households who needed to take on boarders in the Heights. The result was a residential district characterized by nuclear families. It is an irony that VL&I's lack of planning, advertizing, and infrastructure had indirectly promoted in Vandergrift Heights one of the social characteristics that McMurtry had hoped to achieve in Vandergrift.[41] That is not to say that the Heights was devoid of boarding arrangements. There were six large boardinghouses in 1900. Typically, these houses consisted of a family of five and seven unrelated

boarders. Almost always, the boarders were unskilled mill laborers who had recently arrived from Europe.[42] In 1900 these houses were almost the full extent of an East and South European presence in Vandergrift Heights.[43] Fewer than 7 percent of Vandergrift Heights households were East or South European households.

In addition to some social similarities between Vandergrift and Vandergrift Heights, there were also a few consistencies in their built environments. For example, the Vandergrift Heights business district developed partly where the Land and Improvement Company had intended, but it also sprawled along Longfellow for several blocks. A similar unintended commercial development existed in Vandergrift along Columbia Avenue. What made the Heights different was the physical appearance of the business district and the mix of commercial functions it offered to residents. The buildings that were constructed (often by absentee landowners) were the kind of false-front frame structures about which the Olmsteds had warned McMurtry. The commercial establishments provided lower-order goods and services, making it necessary to take trips down the hill to Vandergrift for some items and activities (table 4.3). In 1903, Vandergrift Heights still did not have a bank, jewelry store, or undertaker. More significantly, there were only two churches: Saint Paul's Lutheran, on Wallace Street, and the Free Methodist, on Emerson. Residents presumably attended church in Vandergrift, Apollo, and the surrounding countryside.

The poor condition of Heights streets also contrasted unfavorably with Vandergrift. During 1897, the George G. McMurtry Fire Department No. 1 of Vandergrift tried to protect the Heights from conflagration, but found it nearly an impossible task because the roads and streets were so bad that they could not pull a fire wagon through them. In 1899, Vandergrift Heights decided that it had to establish its own fire department. Vandergrift's fire company donated their hand-drawn hose cart and hoses to the Heights, and McMurtry bought new equipment for the Vandergrift firehouse. Indirectly, therefore, Apollo Iron and Steel had looked out for its investment in Vandergrift Heights.[44]

Unpaved streets had other impacts on Vandergrift Heights. While in Vandergrift the street commissioner oversaw the repair of the brick pavement and the maintenance of sewer drains, his counterpart in Vandergrift Heights was responsible for the removal of garbage, leaves, and other obstacles from the dirt culverts that lined unpaved, uncurbed, unsewered, and unsightly residential streets. The Heights culverts directed the flow of run-off downhill (where it eventually ended up in Vandergrift's already overburdened sewer system—a

Table 4.3. Commercial Structure of Vandergrift Borough, Vandergrift Heights, and East Vandergrift, 1903

Function	Vandergrift Borough	Vandergrift Heights	East Vandergrift
Architect	1		
Bakery	1		
Bank	1		
Barber	6	3	
Books	1		
Boots and shoes	1	1	
Bowling alley		1	
Business college	1		
Butcher	3	2	2
Clothier	1	1	
Cobbler	1		
Confectioner	2	2	
Dentist	1		
Drugstore	3	2	
Dry goods	2		
Furniture store	2	1	
Gas fixtures	1		
General store	2	1	
Gents clothing	4		
Grocer	8	9	1
Hardware store	3	1	
Harness shop	1		
Hotel	3		
Jewelry store	3		
Laundry	2	1	
Lumber yard	1		
Milk depot	1		
Millinery	2	1	
Photographer	1		
Plumber	1		
Pool room	3	2	1
Produce	1		
Queensware	1		
Restaurant	3	2	
Sew. mach/piano dealer	1		
Tailor	3	1	1
Tin shop		1	
Tobacconist	2		
Undertaker	1		
Wallpaper shop		1	

Source: Sanborn Fire Company, *Sanborn Fire Insurance Maps*, Vandergrift, Pennsylvania (New York: Sanborn Map Company, 1903).

combined system for both sanitation and storm runoff). And the two-story, single-family frame houses, located almost anywhere on the fenced lots they shared with outdoor bakehouses, privies, and cow and chicken sheds, gave streets in the Heights an even more unkempt appearance. Vandergrift Heights looked like the frontier towns that Apollo Iron and Steel had ridiculed in *Vandergrift Ready.* It looked also like a newer, treeless version of Apollo.

Clearly, compared with Vandergrift, Vandergrift Heights was "a growth." It is no wonder that the Olmsted firm worried that they might be associated with the place. Vandergrift Land and Improvement Company shared their concerns. Again, it had a dilemma, this time concerning the damage that Vandergrift Heights might do to the image of Vandergrift. Understandably, VL&I was afraid that outsiders would pay more attention to the physical appearance of the Heights than to the positive aspects of Vandergrift. On the other hand, the company could not, to counteract this, extol the positive aspects of the Heights: that might make the place look too alluring, and at the end of 1896, when Vandergrift Heights lots were placed on the market, almost 75 percent of Vandergrift lots remained unsold and the company still had an expensive plan and infrastructure system to pay for. At the same time, VL&I had to be honest about the fact that Vandergrift Heights existed. The best thing was to say as little as possible about Vandergrift Heights.[45]

The penultimate paragraph in an 1897 *Iron Age* article about Vandergrift and the Apollo Iron and Steel mill included a candid but measured mention of Vandergrift Heights, calling it a "colony of smaller houses, the chief feature of which is that every dwelling is surrounded with a plot of ground to enable the tenant to grow vegetables, etc, for his own use." Incorporated in this brief statement were several ideas. First, Vandergrift Heights was a "colony"—secondary, separate, and subservient to Vandergrift. Second, those who lived there were said to be tenants, not "American skilled workmen" and "homeowners" as in the Olmsted plan. Third, and most importantly, the company implied that it had helped to elevate the condition of Vandergrift Heights residents by promoting honest and productive toil in a home garden. Vandergrift Heights was acknowledged positively, but was painted almost as a homely stepchild.[46]

For some Vandergrift Heights residents, their "colony" ultimately served as a stepping-stone to Vandergrift. It also represented a chance for semiskilled workers who could not afford to buy into Vandergrift at least to participate peripherally in the scheme, work toward owning a house freehold, and live rela-

tively close to the Vandergrift mill. Gradually, a lively community started to develop.

The Vandergrift Land and Improvement Company's decision to forego planning and infrastructure for the lower-paid segment of the Apollo Iron and Steel workforce set the foundation for social divisions between the two towns that even an act of municipal consolidation in 1915 could not overcome. Vandergrift residents lived at a lower riverside elevation, but many of them "looked down" on the Heights because of the physical and social contrast between the two places.[47] Nevertheless, the Heights was not at the bottom of the neighborhood totem pole: considered in a larger Vandergrift peninsula context, the upper settlement provided a better living environment than a third residential alternative available to Apollo Iron and Steel workers: Morning Sun.

Morning Sun—aka East Vandergrift

It is unclear when a town emerged on the inside bend of the Kiskiminetas River on the eastern side of the Vandergrift peninsula. According to local historian Robert Szymczak, Morning Sun was settled first, platted next, and sold later (not, like Vandergrift or Vandergrift Heights, platted first, sold next, and settled later). The town's development began after 1879 when farmer David Risher sold the land to Thomas Maher, of Blairsville, and Thomas G. Cornell, of Allegheny City, members of the Maher Coal and Coke Company. For at least twelve years, the company mined coal from several drift mines that had been dug into the side of the steep bluff separating the river flat from the Townsend farm above. It also built several company houses along the lane that would later be surveyed and named Railroad Avenue. Morning Sun (today called East Vandergrift) thus had its beginnings as a "coal patch." Ironically, it was precisely the kind of settlement that McMurtry wanted to avoid making.[48]

Nevertheless, if he had had his way, McMurtry would have been actively involved in the subsequent development of Morning Sun. The Vandergrift Land and Improvement Company, in need of accommodation for unskilled laborers, could have sold or rented the existing housing to lesser-paid workers if McMurtry had been able to acquire the property. Furthermore, with the acquisition of this land, McMurtry would have had greater control over the early phase of the entire peninsula housing market. In 1896, however, William Chambers (who had purchased Maher Coal and Coke's property in 1891) sold Morning Sun to

William S. Beamer, of Apollo.[49] Symczak argues that, after this transaction occurred, McMurtry tried to buy the property from Beamer. In turn, Beamer offered Morning Sun to McMurtry at triple the amount that he had paid for it, supposedly infuriating McMurtry to such an extent that McMurtry in part planned Vandergrift Heights as retaliation. Meantime, in 1896, Beamer had begun to sell Morning Sun lots for $175. He disposed of 155 properties between 1898 and 1917.[50]

Vandergrift, the "model" town, was a new kind of settlement: Morning Sun was something else again. Three unpaved streets paralleling the river—Quay, McKinley, and Railroad—bisected Chambers and Reed Streets to form a grid, as in Vandergrift Heights and Apollo. Unlike either of the other two developments on the peninsula or Apollo, however, there was no uniform street width. The widest street, Railroad, was in fact two narrow lanes bisected by a high artificial levee that kept the WPRR above flood level. Maher Coal and Coke's "black houses," so-called because they were unpainted, lined the west side of Railroad. To the east, only a few yards away from the Kiskiminetas River, were two additional paths, called Elm and Willow Streets. (It is interesting to note the use of "natural" street names—the kind suggested for Vandergrift by Olmsted and Eliot.)

Within this street grid there emerged by 1900 an unincorporated settlement with a population of 620. Nearly all of the 247 employed individuals worked in the steel mill, although a few coal miners and farmers remained—a reflection of the antecedent coal patch. The occupational structure favored operatives and laborers, much more so than in the Heights. A laborer headed the average household. Nevertheless, Morning Sun households were comparable to Vandergrift and Heights households in terms of size and the number of employed household members. In the average Morning Sun household, two of five persons were employed and three were over the age of sixteen. Unlike Vandergrift, however, but similar to Vandergrift Heights, all household members were usually related. Only five households had live-in servants. Furthermore, few households had boarders. In Morning Sun—as in Vandergrift Heights—boarders lived in places that were specifically boardinghouses. There were six large Morning Sun boardinghouses. On average, they consisted of a family of five and nine boarders. Three of the houses were operated by Russian Poles, one by a Hungarian, one by an Italian, and one by a Pennsylvanian.[51]

Unlike Vandergrift Heights, foreign-born arrivals to Morning Sun did not necessarily go to boardinghouses to live. Given that the East Europeans living

in Morning Sun either came to the United States with their families or brought their families over shortly after they arrived, they were almost as likely to start independent households. In 1900, twenty-seven household heads were foreign-born. A few owned their accommodation, but most rented. The inability to go to a better location because of their low wages, differences in religion, customs, and language, and the prejudices of established Vandergrift residents, made Morning Sun attractive to newly arrived immigrant laborers. Thus, the settlement that developed on the eastern side of the Vandergrift peninsula was typical of many western Pennsylvania industrial towns: an eastern European "hunky flat." Low ground and the threat of flooding made this kind of place a less-desirable location for those who wanted to purchase property and then live in it. Such flatlands, however, appealed to speculators who wished to receive rental income from their property.[52] Usually, flats settlements participated in the local economy by providing unskilled labor, but they were separated from the rest of town by class differences and by busy steel-mill railyards, as in Braddock or Sharon. In the case of Morning Sun, the flats were separated from the Vandergrifts by a steep bluff. Morning Sun's East European laborers lived, literally as well as figuratively, in the shadow of the large houses near the intersection of Franklin and Washington that belonged to Apollo Iron and Steel craftsmen and mill managers.

The social and physical differences between Morning Sun and Vandergrift were accentuated when a whitewashed fence, fourteen feet high, was built along the back of Vandergrift's Franklin Avenue lots and across the path that connected the two settlements in an attempt to keep Morning Sun residents from walking through the upper town on their way to work. The minutes of the Vandergrift Borough Council suggest that it was the borough that erected the fence. Folklore and various local histories, however, say that McMurtry was responsible. No matter who had it built, with the fence in place immigrant laborers would have had to circumvent the town to get to the mill by walking along the railroad tracks by the Kiskiminetas. Local historian John Owens claims that no sooner had the fence been put in place than Morning Sun residents tore holes in it and continued to walk the tidy streets of Vandergrift.[53]

The fence underscored the contrast between the immigrant and laboring world of Morning Sun and the more affluent, American lifestyle apparently enjoyed by the average Vandergrift family. To celebrate this lifestyle (and advertise the town to potential investors), in 1900 the Vandergrift Land and Improvement Company published a fifty-five-page booklet titled *Vandergrift: Its Homes and In-*

Fig. 4.7. Home interiors showing residents' interests: "Music and Art . . . find place among the influences in these pleasant homes." (From *Vandergrift: Its Homes and Industries.* Illustration reproduced courtesy of the Library of Congress, Washington, D.C.)

dustries.[54] Intended also as a souvenir for residents, the booklet consisted of a series of paintings of Vandergrift scenes that had been lithographed in muted, gray tones. Accompanying each painting was a sentence offering a suggestion as to what the accompanying scene meant in terms of moral uplift, personal betterment, patriotism, and the work ethic. Adjacent to a painting of a "typical" Vandergrift front parlor that contained a piano, sumptuous horsehair settees, family portraits, Victorian finery, and flocked medallion wallpaper, for instance, was the sentence: "Music and art find place among the influences in these pleasant homes" (fig. 4.7). This image, combined with several paintings of Vandergrift residential streets, was intended to prove that the good homes that McMurtry wanted his workmen to build had materialized (figs. 4.8 and 4.9). At least part of the environmentally deterministic equation of "good houses [making] better workers" was in place.

The booklet also glorified other means of domestic self-improvement available to the people of Vandergrift. In regard to recreation, "the gun club is a popular resort, particularly with the younger set, although their elders often set the

Fig. 4.8. Street scene in the business district. (From *Vandergrift: Its Homes and Industries.* Illustration reproduced courtesy of the Library of Congress, Washington, D.C.)

Fig. 4.9. Residential street scene. (From *Vandergrift: Its Homes and Industries.* Illustration reproduced courtesy of the Library of Congress, Washington, D.C.)

Fig. 4.10. Casino Building—Vandergrift's town hall. (From *Vandergrift: Its Homes and Industries.* Illustration reproduced courtesy of the Library of Congress, Washington, D.C.)

pace." Vandergrift residents could also better their minds: "In the Casino set apart for entertainment, pleasure and education are combined. A library, more than five thousand books, available to old and young" (fig. 4.10). For the emerging Vandergrift urban elite—the rollers, heaters, superintendents, clerks and merchants—there were two fraternal organizations: the Freemasons and the Odd Fellows.[55] To make sure that McMurtry's vision of Vandergrift endured there was a town council and a school board and a burgess, Pennsylvania's early-twentieth-century municipal hybrid-equivalent to mayor, police chief, and magistrate, all in one office. The booklet noted that "everywhere" the "peace and order" of Vandergrift was "the outcome of a successful [McMurtry, Olmsted, and Eliot] plan which has helped man to help himself."[56]

Despite the attempt to separate Morning Sun from Vandergrift by a fence and the Heights from the borough by a mile of vacant ground, the three settlements on the Vandergrift peninsula were functionally inseparable. Each day, American, Italian, and Polish laborers trudged up the steps from Morning Sun or along the busy WPRR rail line to work in the Vandergrift mill. These unskilled workers interacted with rollers and heaters from Vandergrift and match-

ers and catchers from Vandergrift Heights. In a classic case of geographic complementarity, the contrasts between the residents of these three places drew them together spatially and socially (although not necessarily culturally) at the Vandergrift mill. By 1900, a three-faced community had emerged on the peninsula: an ordered model town, a "standard" western Pennsylvania town, and a disorderly "hunky flat." Vandergrift excluded lower-paid workers and immigrants through the high cost of lots and homes; Vandergrift Heights included lower-paid workers but initially excluded immigrants through sales policies; and Morning Sun had become a popular destination for newly arrived European immigrants.

Apollo Iron and Steel and the Vandergrift Land and Improvement Company's policies further exacerbated the differences between the three settlements. The differences may have been inevitable, anyway. As long as profit in the mill and profit in the housing market were the primary forces underlying the creation of nearby residential settlements, several kinds of residential districts, each with their own peculiar mix of housing and infrastructure, would emerge, as they had done in "unplanned towns" all over southwestern Pennsylvania. As long as the division of labor in the steel mill was linked to a wage/ethnic hierarchy and housing acquisition was linked to family income, residential districts would be filled by particular social and ethnic groups. Skilled, semiskilled, and unskilled, highly paid and lowly paid, American-born and foreign-born . . . workers were sifted and sorted through residential districts according to their ability to pay for their accommodation. In the case of the Vandergrift peninsula, the breakdown showed five residential districts—five sorting levels: an Olmstedian landscape of home owners in Vandergrift; the company houses of Sherman, Sumner, and Farragut Avenues in Vandergrift; the "American" Heights; the first addition to the Heights with its nascent Italian enclave; and Morning Sun. Partly by design and partly by accident, McMurtry had laid the groundwork for a place that possessed housing opportunities for all of the various kinds of labor he needed to make a successful mill. Given the numerous departures from his early vision of Vandergrift, for how long could he expect this success to continue?

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Part 3 / Gauging Vandergrift's Success

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CHAPTER FIVE

The Steel Strike of 1901

After the Apollo strike and lockout of 1893–1894, Apollo Iron and Steel's wealthy stockholders provided the financial backing to build a spacious new mill at Vandergrift. Having acquired state-of-the-art steelmaking equipment and assembling a promising team of department superintendents and engineers, within three years the Vandergrift mill dominated production, making more black and galvanized steel sheets than any other producer in the entire country. Ultimately, the mill's success provided these investors with the additional leverage needed to maneuver their way through a series of corporate mergers and in 1901 to become stockholders and officers of the U.S. Steel Corporation.

Throughout this process, the members of Apollo Iron and Steel had supported company president George McMurtry as he developed and implemented a town-building scheme targeted primarily at skilled and semiskilled craftsworkers, the occupational groups that had traditionally shown the greatest tendency toward unionization. Central to the scheme were three strategies. First, McMurtry needed to start with the right social clay—workers whom he already knew were loyal to him and disdainful of unions. McMurtry offered permanent employment and the promise of promotion not only to nonunionized rollers and

heaters who had come to the company's aid in 1893–1894 but also to farm boys and coal miners, as well as former mill operatives and laborers. Second, he created for these workers a new living environment—one quite unlike any other southwestern Pennsylvania steel town; he orchestrated the financing of this town, planned it, and built it. Third, he encouraged the workers to buy property in this new place. McMurtry and his stockholders hoped that workers would remain so contented and become so financially and emotionally committed to their property and fledgling community that they would never dream of risking its loss by joining a union or going on strike.

The first test of McMurtry's scheme came in 1901, the year that the U.S. Steel Corporation was formed, when a major steel strike threatened to paralyze western Pennsylvania. At issue was the right of workers to organize. Not surprisingly, the Amalgamated Association pinpointed the Vandergrift works as one of the mills that had to be unionized. It was operated by George McMurtry and U.S. Steel as an "open," nonunionized shop. If the Vandergrift shop floor could be "closed," it would be a major victory for organized labor.

Apollo Iron and Steel's Place in the Rise of "Big Steel"

Industrial restructuring during the 1880s and early 1890s had put the bulwark in place for a totally new business environment in the American steel industry. Although many firms still sought to compete with other producers by enlarging their market and increasing production capacity in much the same way as they had in the past, their activities required increased attention to product development, market research, business logistics, and, perhaps most importantly, capital acquisition. To integrate, retool, rebuild, and rework the former iron-production system and to ensure a constant supply of labor and production inputs, steel companies needed investment capital. They got it by changing their legal status. In almost sequential order, some companies went from being proprietorships to limited partnerships to corporate ownership.

During this process, many ironmasters (later, steelmasters) relinquished increasing amounts of company control to investors in return for the investment capital that would fund industrial restructuring. Although many investors never had direct involvement in the day-to-day intricacies of steel production, investors who were elected to corporate boards of directors did. These investor-directors controlled the purse strings. They also set, usually on the basis of "professional" advice and recommendations made by company managers, corporate

policy toward production and marketing. The rise of the corporate steel industry was, therefore, underpinned by the active participation of finance capital. It also recast the ironmaster/mill owner into several, sometimes overlapping, roles: steelmaster, operating executive, manager, and stockholder.

Although horizontal and vertical integration of the production process within single firms had been an increasingly important part of the steel industry through the 1890s, as the turn into the twentieth century approached, investors increasingly used their financial resources to acquire controlling interests in formerly separate production firms and merge them into new corporate entities. The frequency and complexity of these mergers, and the economic and spatial scale at which they took place in many industries—not only steel—signaled the dawn of a new industrial era that is now known by historians as "the rise of big business." On January 10, 1899, Apollo Iron and Steel became a part of this development when the company sold the old Apollo mill to the American Tin Plate Company of New Jersey for $250,000.[1]

In 1898, one of the founders of the National Biscuit Company (today's Nabisco), William H. Moore, and several business associates organized the American Tin Plate Company. Intense competition between several dozen small, fledgling tinplate producers in the mid-1890s had caused tin prices to fall and companies to fail. Moore recognized the situation as an opportunity to integrate the industry horizontally. He convinced thirty-eight tin producers in Pennsylvania, Ohio, Indiana, Maryland, West Virginia, Illinois, and New York to consolidate their holdings into one company—because there was long-term "safety in numbers." He also made consolidation lucrative for owners: "The transaction establishing the American Tin Plate Company permitted the previous owners of the various properties to take either full option price on their plant in cash, or preferred stock equal to the cash valuation, plus a bonus of 100% in common stock. Common stock was issued merely as a bonus to the former owners."[2]

The Apollo mill was the thirty-ninth acquisition made by American Tin Plate. Apparently, because American Tin Plate issued $325,000 additional preferred stock about the same time that the transaction took place, Apollo Iron and Steel chose the preferred stock option. Thus for an old and troublesome mill, McMurtry and his company received at least 1 percent ownership in a company capitalized at $46 million. Because of American Tin Plate's subsequent success (the company "had an accumulated surplus of $6.3 million" in 1901) this proved a boon to Apollo Iron and Steel. More importantly, McMurtry and Moore were,

in a sense, partners. This relationship would continue and intensify throughout the remainder of 1899 and 1900.[3]

After Moore and his associates set up American Tin Plate and drew other manufacturers such as McMurtry into their fold, they initiated similar merger schemes in other portions of the steel industry. During 1899, the "Moore Group" formed new steel companies at the rate of one every two months. The second Moore company was National Steel. Incorporated on February 25, 1899, it consisted of eight makers of "crude steel" in Ohio and Pennsylvania and a number of mining companies in Minnesota and Michigan. National Steel would supply steel ingots to American Tin Plate. Together, the two companies would operate as a vertically integrated steel-production system.

In mid-April 1899, National Steel began providing steel for the third Moore company to be organized, American Sheet Steel. Extending his rationale for creating American Tin Plate, Moore wanted American Sheet Steel to dominate and control the market for steel sheets. The task of creating this company, however, was more formidable than organizing American Tin Plate. Decades of ineffective American tin tariffs had stunted the growth of the tin industry. Until the federal government made changes to the import laws during the 1890s, few producers had joined Laufman, Kirkpatrick, and Dewees Wood as tin makers. Moore could virtually dominate the tin industry because it was so small. He was, however, able to bring only (if that is the right word) 70 percent of sheet-steel capacity under the control of American Sheet Steel. But to control even this 70 percent, Moore needed to acquire Apollo Iron and Steel's Vandergrift works. Of the eighteen companies that he had lined up to make galvanized or black sheets as part of American Sheet Steel in 1899, none came close to the Vandergrift mill's annual capacity (186,500 gross tons—nearly one-fifth of the total production capacity for the entire sheet steel industry). It is no wonder that *Iron Age* announced on April 5, 1899, that "in completing the details of organization of the American Sheet Steel Company a most important development has been evolved": Apollo Iron and Steel had agreed to enter American Sheet Steel, and George McMurtry would serve as president.[4]

American Sheet Steel was incorporated on April 14, 1899, the same day that Moore organized another company, American Steel Hoop. Capitalized at $52 million, American Sheet Steel owned not only McMurtry's Apollo Iron and Steel Company but also thirty-six other companies in Pennsylvania, Ohio, Indiana, and West Virginia: "With their close affiliations with the National Steel Company, the American Tin Plate Company and the American Steel Hoop Com-

pany, the American Sheet Steel Company will have the sheet trade of the company [country?] very well in hand, and will have a very commanding position in that trade. We understand that it is the intention of the concern to go after foreign trade in sheets very aggressively."[5] One might think, given his title, that as president McMurtry had ultimate control over American Sheet Steel's many production facilities. The historical evidence suggests otherwise. The composition of the board of directors for each of the four Moore companies (which were never legally combined as one corporate entity) created an inner circle of six directors. These six sat on all four boards. In charge of the American Sheet Steel mills, McMurtry answered to the inner six as this group tried to coordinate production between the various Moore companies. Despite the upheavals that took place directly above him at the pinnacle of the American Sheet Steel corporate structure in 1901, McMurtry's role remained relatively unchanged for four years.[6]

During 1899 and 1900 Moore and his associates virtually controlled the tinplate, sheet, and hoop industries through the American Tin Plate, American Sheet Steel, and American Steel Hoop companies. The Moore Group was not unique in its activities (table 5.1). New York financier J. P. Morgan put together his own steel empire by forming two specialized companies—National Tube (fabricators of iron and steel tubes and pipes) and American Bridge—as well as Federal Steel—a vertically integrated holding company that was created by the merger of several smaller mining, refining, and rolling companies. Other financiers formed large, independent companies that specialized in various types of production: wire, rods, and nails (Elbert Gary's and John W. Gates's American Steel and Wire), steel girders for the construction industry and armor plates for shipbuilding (Bethlehem Steel), merchant bars (Republic), and structural steel (Jones & Laughlin Steel). Considered together, the Moore and Morgan groups, American Steel and Wire, Bethlehem, Republic, and Jones & Laughlin Steel dominated the finished-product portion of the steel industry.[7]

Despite these changes in the industry, the Carnegie Company still remained the largest single steelmaker. In 1900, it "produced 18% of the nation's total ingot output." Concentrated around Pittsburgh, this firm almost exclusively devoted its manufacturing to rails and semifinished products such as ingots, bars, and billets. Fifteen Carnegie Company subsidiaries developed in support of Carnegie Steel. They included H. C. Frick Coke Company, Carnegie Natural Gas Company, four separate railroad companies, three mining companies, two water companies, the Pittsburgh Steamship Company, and the Union Supply

Table 5.1. Major Steel Companies, 1899–1900

Moore Group
American Tin Plate (tinned and terne sheets)
American Sheet Steel (iron and steel sheets)
American Steel Hoop (steel hoops)
Morgan Group
National Tube (iron and steel tubes and pipes)
American Bridge (bridges)
Federal Steel (mining, refining, and rolling)
American Steel and Wire (wire, rods, and nails)
Carnegie Company
Carnegie Steel (ingots, bars, billets, rails)
H. C. Frick Coke Company
Carnegie National Gas
railroads
mining companies
Pittsburgh Steamship Company
Union Supply Company, Ltd.
Bethlehem Steel (girders and armor plate)
Republic Steel (merchant bars)
Jones & Laughlin Steel (structural steel)

Company.[8] This vertically integrated business empire dominated the semifinished steel industry, and even many finished-product makers relied on Andrew Carnegie for their materials. Despite their dependence, however, Moore, Morgan, and the other producers did little to combat Carnegie's dominance until Carnegie threatened to expand into finished products; namely, tubes and rods. If allowed to do so, the Carnegie Company would then compete directly with Morgan's National Tube Company and Gates's American Steel and Wire. Steelmakers predicted that the end result of such competition would be a price war and the demise of the existing combinations.[9]

Worried by these developments, J. P. Morgan—at the behest of the railroads, Gary, of Federal Steel, and Gates—in December 1900 began to make overtures to Carnegie Steel President Charles M. Schwab concerning a merger of Carnegie Steel, the Morgan companies, American Steel and Wire, and the Moore companies. Moore and his associates agreed to the idea, realizing that their firms were overcapitalized and that they could not withstand a protracted price war. The choice for them was to join the conglomerate—to be called the United States Steel Corporation—or to be put out of business. After a period of intense negotiation, Carnegie, too, agreed to the deal.[10]

U.S. Steel received its charter under the laws of New Jersey on February 25, 1901. Capitalized at more than a billion dollars (its real value was probably somewhere between $600 million and $800 million) and spread across a large portion of the United States, the corporation was larger than Standard Oil had been before the Sherman antitrust regulations broke it up—a point repeatedly emphasized by the press. Fearing a formal government inquiry, U.S. Steel needed to assure the public, its competitors (such as Bethlehem and Jones & Laughlin Steel), and the federal government that it was not like Standard Oil. At a meeting of the U.S. Steel executive committee on April 20, 1901, "attention was called to the fact that certain newspapers seem to publish any and everything that will create sufficient sentiment to influence newspapers sales." The committee, resolving "to do all we reasonably can to keep public sentiment right and the facts before the public," went on: "The United States Steel Corporation is not one employer . . . individual companies are distinct and separate for themselves; . . . while this company owns the stock of the different companies . . . they must all stand for themselves." Under its charter, U.S. Steel could only hold stock in other companies: it did "not operate any iron or steel works, iron-ore mines, coal mines, coke ovens, railroads, or lake vessels." That was the job of the ten companies in which it held stock.[11]

What U.S. Steel's charter said the corporation would do and what the directors told the public it did differed from what actually went on within the confines of the U.S. Steel boardroom in New York City's Empire Building. For nearly a decade, the directors of U.S. Steel looked for ways to maintain a benign "stockholder" public image but at the same time coordinate and control subsidiaries. Part of their strategy utilized the same type of arrangement involving interlocking corporate boards of directors that the Moore Group had used to coordinate its holdings. By placing members of the U.S. Steel executive board on subsidiary boards, the parent firm could keep track of company affairs. Subsidiary presidents would be allowed to make decisions and react to problems independently as long as they reported their activities to the parent firm. During U.S. Steel's infancy, their decision-making responsibilities included dealing with labor in general and the unions in particular.

In the spring of 1901, the subsidiaries prepared to negotiate their first annual wage scale with the Amalgamated Association of Iron, Steel and Tinworkers since the creation of U.S. Steel. Within weeks, the executive board discovered the problems that came with having semiautonomous subsidiary presidents. It had given subsidiary presidents room to act in ways that might be good for a sub-

sidiary, but not good for U.S. Steel at large. This was particularly true in the case of American Sheet Steel and its president, George McMurtry.

McMurtry's Role in the Labor Troubles of 1901

Despite the comparisons with Standard Oil, many industrialists, some politicians, and at least a portion of the general public viewed the consolidations in the steel industry as a good thing. Steel prices had fluctuated wildly for decades, and dozens of firms went bankrupt with each price swing; mergers would stabilize an industry that had become absolutely vital to the U.S. economy. From the point of view of organized labor, however, there was a dark side to the mergers. With consolidation, unionized mills and furnaces were lumped together with nonunion works under common ownership. Parent companies complained that they could not operate profitably in plants where union wage scales and union work rules existed, so they began to shut down unionized production sites and transfer machinery, managers, and even workers (they of course had to be nonunion) to nonunion plants. During the first six months of 1901, for instance, all nonunion American Sheet Steel plants ran at full production, but the company closed nine union mills. In the face of such tactics, the Amalgamated Associated had to organize nonunion plants in order to maintain what tenuous ground it had left in the steel industry after the turbulent strikes of the 1890s.[12]

In April 1901, two months after the formation of U.S. Steel, the Amalgamated held an organizational meeting at American Sheet Steel's nonunionized Dewees Wood works in McKeesport, Pennsylvania. Upon learning of the meeting, the Dewees Wood manager, Persifor F. Smith, promptly fired the new union members. Enough pro-union sentiment existed in the mill, however, for workers to organize a strike. They insisted that, because there was interest in the union, Dewees Wood should immediately become an Amalgamated mill. American Sheet Steel's president—McMurtry—stepped in and managed to get the strikers back to work, arguing that a union wage scale had to be in place for a mill *before* its workers could organize. No such wage scale existed for Dewees Wood, meaning that workers could not organize. He intimated, however, that American Sheet Steel would discuss the issue with the Amalgamated at annual wage-scale negotiations later in the spring.

According to labor and steel-industry historian David Brody, Elbert Gary—chairman of the executive committee of U.S. Steel—knew nothing of the events at Dewees Wood until after the strike had been settled. McMurtry, of American

Sheet Steel, did not tell him. And now, because of the way in which American Sheet Steel had resolved the difficulties, the issue of extending union wage scales to nonunion mills would have to be addressed at the 1901 summer wage-scale conference.[13]

In response to the Dewees Wood situation and in anticipation of the wage-scale negotiations, the executive committee of U.S. Steel debated for two months about how best to handle the labor situation in its mills, which now involved two basic issues. First there was the decision-making autonomy of subsidiary firms; second there was the extension of union rules to nonunion mills. Within the U.S. Steel executive committee there was disagreement over the prudence of the benign "hand's-off the subsidiaries" policy that had become part of the U.S. Steel public image. The executive committee meeting minutes for April 20, 1901, stated that, with regard to "the plan of giving local presidents and managers the handling of what may appear to be petty situations," at least one member was "rather inclined to think that this power should not be put in the hands of the local officers." Other members believed that subsidiary presidents should be allowed to take care of problems on the spot. The matter was laid over for future debate so that the second issue could come up—the extension of the union scale to nonunion mills. Afterwards, the committee issued a directive to its subsidiary presidents: "We are unalterably opposed to any extension of union labor and advise subsidiary companies to take firm position when these questions come up and say that they are not going to recognize it, that is, any extension of unions in mills where they do not now exist; that great care should be used to prevent trouble and they [subsidiary companies should] promptly report and confer with this corporation."[14]

At the end of June, the managers of American Tin Plate, American Sheet Steel, and American Steel Hoop works met with the Amalgamated in Pittsburgh to set the wage scale for their union mills. American Tin Plate and the union easily came to a wage agreement, and it appeared as though American Sheet Steel would do the same. The Amalgamated president, Theodore J. Shaffer, then made a motion that would require American Sheet Steel to extend the union wage agreement to the nonunion mills in their system, including Wellsville, Ohio, Dewees Wood at McKeesport, Kirkpatrick at Leechburg, Scottdale Iron and Steel, and Vandergrift. In effect, Shaffer argued that, based on the resolution of the April conflict at Dewees Wood, American Sheet Steel had indicated that for a works to become unionized, a union wage scale had to be in place. Now that the old scale agreement was to expire on June 30, the new agreement could

include the necessary clause that would permit any works to become unionized if the workforce so desired.

Persifor Smith, who represented the American Sheet Steel managers, refused to sign. Instructed to be "opposed to any extension of union labor," he countered Shaffer by arguing that the nonunion mills for which the union desired a scale had operated for years (and in at least one instance [Vandergrift], for its entire existence) without the union. Furthermore, American Sheet Steel would not impose the union on nonunion workers. Smith maintained that no evidence existed, except in the case of Dewees Wood, of any prounion sentiment in any of the nonunion mills in the American Sheet Steel system. The unions appeared to be so weak at Saltsburg and the Old Meadow works at Scottdale that for them, too, American Sheet Steel would not sign a union wage scale, despite the fact that they had operated as union mills under the 1900–1901 contract.

American Sheet Steel and the union thus came to an impasse. President Shaffer announced that the Amalgamated would strike if American Sheet Steel did not adopt the union scale for the mills in question. By way of reply, American Sheet Steel closed all of its mills and sent the workers home. Later in the same day, Shaffer met with representatives of American Steel Hoop. The result was the same. American Steel Hoop refused to extend the union scale to its nonunion mills.

Two days later (July 2), the U.S. Steel president, Charles M. Schwab, met with the executive committee to discuss the situation. Schwab remarked that "this is the very worst time of the very worst year [1901] to have any trouble." Only in its first year of existence, U.S. Steel was still learning how to manage its complex, far-flung, and somewhat unwieldy internal hierarchy of stockholders, subsidiaries, and managers. Possibly the most devastating aspect of the entire strike for the directors was that "the demand for black and galvanized sheets is enormous and has filled the mills up with tonnage for the next three or four months." The closure of the U.S. Steel sheet mills would lead to a shortage of sheets and to price increases and would benefit the corporation's competitors, American and foreign.[15] For the executive committee, the only logical solution was to "concede" to the union three mills that U.S. Steel had targeted for operation as nonunion mills: the unionized Saltsburg and Old Meadow works and nonunionized McKeesport. After the concession, the committee planned to close these three mills anyway.

Who would be sent to negotiate this with Shaffer? Members of the U.S. Steel board were reluctant to get involved for fear of disrupting U.S. Steel's benign

"stockholder" image. Neither were they sure that American Sheet Steel president George McMurtry could effect a settlement. According to the minutes from July 6, 1901, the executive committee thought McMurtry was too hardline in his stance toward labor. McMurtry had supported the decision of a superintendent at the Wellsville mill to fire a group of workers who had tried to organize a union lodge earlier in the week, thus giving signals of inflexibility to the Amalgamated. Moreover, McMurtry had not kept U.S. Steel informed of the happenings at Dewees Wood in April. The executive committee secretary recorded that Elbert Gary

> regards Mr. McMurtry as a very able, conscientious man; nevertheless it may be that he is so grounded in his beliefs concerning these troubles that he has been a little inclined to not volunteer to us the information concerning the two mills [McKeesport and Wellsville] we ought to have. The chairman [Gary] does not believe in criticism of a man in that position, every one being liable to make mistakes, yet he doubted whether Mr. McMurtry would like to go and meet the association representatives.[16]

Two days later the U.S. Steel directors chose Veryl Preston—one of the original investors in the Vandergrift Land and Improvement Company and presumably connected to one of American Sheet Steel subsidiaries—to meet with Shaffer in Pittsburgh. Preston was to offer the Old Meadow works, Saltsburg, McKeesport, and the additional mill where there had been union support, Wellsville. At this July 8 meeting, U.S. Steel directors then began to look retrospectively at the course of events that had led them to concede these mills. Executive committee member Percival Roberts complained about the lack of "full and accurate information as to what the situation is in these different mills." He blamed "the officers of the companies" and feared "that [union] lodges are established throughout the sheet mills to a greater extent than we had supposed." Gary then, indirectly, gave American Sheet Steel and McMurtry a verbal slap on the wrist: "The chairman complimented the tin-plate people on the admirable management of their business, and feels that if Mr. Reid [chairman of the American Tin Plate executive committee] had been in charge of the business of the hoop and sheet mills he would have settled this long ago."[17] Three days later, Preston met with Shaffer in Pittsburgh. Although the company offered the union four mills, Shaffer was resolute: Either sign the scale for all of the mills—union and nonunion—or the union men would stay out on strike. Furthermore, Shaffer threatened to organize lodges in as many nonunion mills as possible.[18]

For American Sheet Steel and American Steel Hoop, the issue became one of keeping union organizers away from their nonunion works, even if it required spying on employees away from work and making threats of discharge. Although American Sheet Steel had restarted four mills in the Kiskiminetas Valley with nonunion labor—Apollo, Vandergrift, Leechburg, and Saltsburg, as well as the Old Meadow and Scottdale Iron and Steel mills in Scottdale—it anticipated that these mills would be the targets of unionization efforts. On the same day that Preston and Shaffer met, an anonymous letter from Vandergrift appeared in the *National Labor Tribune:* "A man must not think loud here, as even the trees have ears. When any two or more men get together, since the sheet workers went on strike there is sure to be some Judas . . . not far off. . . . The men dare not trust one another."[19]

Vandergrift's Reaction to the Troubles

On July 20, 1901, the American Sheet Steel management held an antiunion meeting in the Vandergrift Casino for all Kiskiminetas Valley iron- and steelworkers. That morning, the weekly *Vandergrift Citizen* carried the headline "DON'T WANT TROUBLE OF '93 OVER" and an article that expressed the newspaper's opinion about the dispute:

> The workmen of the Vandergrift mills can look upon the present labor trouble with a good deal of complacency.
>
> Since the starting of the mills here five years ago the work has been steady, the wages are the highest that are paid, the conditions so pleasant, the management has been so fair and just, that there cannot possibly be any reason for any disaffection or desire to change. In the unionizing of the mills they would have everything to lose and nothing to gain.
>
> To the workmen here it partakes of a grim humor to hear Mr. Shaffer say that their fight is to protest the non-union workers. It is nothing more than a desire to finally get them out of their jobs.
>
> Under the present conditions our town has been exceedingly prosperous, and the workmen have been able to acquire most comfortable and pleasant homes here, and have them paid for too.
>
> The present trouble is not a question of higher wages or less hours to work, but it is a desire of a certain number of men to control works that they cannot have any possible claim to, and in which the men working are satisfied and independent.

> A worse form of tyranny than this cannot exist anywhere. It is un-American and a strike at the very liberty of which the union prates so much.
>
> The Vandergrift men are men of sense and independence and there is no danger that they will be mislead [*sic*] by any effort that may be made to change the present favorable conditions existing here.[20]

The tone of the meeting that afternoon in the Casino was much the same. The assembly first elected as chairman a roller who was to play a prominent role in the days to come, Joseph T. Daugherty; then fifty-seven men approached the platform to speak. The following week's *Vandergrift Citizen* reported some of their remarks (I reproduce only a sample). The first quote is from Daugherty himself:[21]

> In '93 when the Apollo Iron and Steel Company decided to operate their plants non-union, Mr. McMurtry said, gentlemen, go to work and we will take care of you. . . . We have been taken care of ever since to such an extent that it has become a common remark that there are only two holidays in Vandergrift, the Fourth of July, the Nation's great holiday, and Christmas, the day we celebrate the entrance of our Christ into the world [the implication was that there was no need to celebrate Labor Day, which had been made a national holiday in 1894 and had strong associations with trade unions at the time]. . . .
>
> We have received good wages, steady employment, and everybody [is] entirely satisfied; no friction or [dis]content. Have we received anything else? Yes. We have an entire moral and modern industrial town, to which hundreds are journeying every year in search of steady employment at good wages. A place where every man is as good as his firm; a place where an industrial people quote a scrap boy as good as a roller in the eyes of the management. . . . I can say truthfully from the bottom of my heart, that I have never received better treatment anywhere.
>
> —Joseph T. Daugherty [replacement roller during the 1893 Apollo strike and lockout; first-day Vandergrift lot buyer]

His words were echoed by another first-day lot buyer:

> I have been in this mill ever since it went non-union, and about two years before. . . . We go [to] these union mills and union places to-day, and you see most of their people with hardly two dollars of their own. We, as a people here I hope, I think, are never without a dollar in our pockets, and good clothes to wear; what more do we want! What more do we need! If a man does a fair, square, and honest thing he gets promoted. If I would have waited on the Amalgamated Associa-

> tion, I would never have gotten what I have to-day; I would have been in rags.
> —Harry Beck [promoted from laborer to heater in the first year of the 1893 Apollo strike and lockout]

A Vandergrift Heights homeowner was very future-oriented:

> Now, do you think it would be right for us to go away and leave our creditors? We all have lots of them. I have. Do you think that would be good policy for men who want to join the Amalgamated Association? For my part I am perfectly satisfied as far as I have gone. I expect to go further. I think the mill men in Vandergrift are an improvement on anything I have ever come in contact with. I think that [they] are interested in more than just taking care of their families here in Vandergrift. . . . I am going to make an effort to pay what I owe and pay for my home, and I know there are hundreds here making the same effort.
> —William J. Duffee [Vandergrift mill worker]

Not everyone who spoke worked at the mill:

> Are the men at Vandergrift satisfied? Are they going out? I say, in God's name, no. They have nothing to go out for. They have nothing to strike for. The men of Vandergrift, Leechburgh [*sic*], Apollo and Saltsburg are working, to my mind, under the best conditions that any workmen could get.
>
> They work as American citizens. They are under the dictation of no one man. Each man is king of himself and no other man has the right to call out you, or any set of you, because there might be some trouble at some other point. . . . Now gentlemen, I have just this to say: Is there any man in Vandergrift, who has thought, or in Leechburg, or in Apollo, or Saltsburg, who is thinking of going out from his work and joining with any organization? Now if there is, I have only this to say, and I am going to put it in the mildest term I can—I could make it stronger, but I don't believe in swearing—I simply say this; that he is a "darned fool." (Loud applause.)
> —J. S. Whitworth [cashier of the Vandergrift Bank.]

An American Sheet Steel official, Eugene W. Pargny, responded to the testimonials by telling the meeting: "Gentlemen, I want to say most emphatically that we are here to look after your interests, and propose to do so as long as we have your confidence." The assembly then passed a resolution in support of American Sheet Steel, and five days later chairman Daugherty received a tele-

gram from New York City: "Have just received copies of resolutions and minutes of Casino meeting. My feelings of appreciation prompt me to wire you hearty thanks and congratulations. Will write. Geo. G. McMurtry." Obviously, McMurtry viewed the Casino rally as a great success.

However, a man who identified himself only as Steve wrote to the *Amalgamated Journal*, the union's weekly paper, to report triumphantly that less than one-fourth of the workforce had attended (he failed, however, to mention that one-fourth of the employees was more than the number of Vandergrift skilled and semiskilled workers who would be affected by unionization). Steve said the attendance would have been lower, but "those poor fellows are so bound up by their property investments that they are afraid to make a move publicly in favor of organization, but the union sentiment is gaining ground even in God-forsaken Vandergrift, and those poor slaves will yet be prevailed upon to make an attempt to remove the shackles which bind and make them to all intents and purposes greater slaves than were the colored men of the south before the war."[22]

There may have been some union support in Vandergrift, but many of American Sheet Steel's skilled nonunion workers and their sympathizers tried hard to deny it, making it very clear to others in southwestern Pennsylvania that they had no intention of joining the union or going out on strike. An article by Walter J. Christy, correspondent to the July 24, 1901, *Pittsburgh Commercial-Gazette*, contained several profiles of nonunion workmen and quoted them on their attitude to the strike. E. D. Klingensmith, who said he had once been a roller at the Apollo mill and a former union member, would rather "give up my position before I would again become a member of the Amalgamated Association. . . . I am through with that organization forever." Christy's article continued: "John Buzzard, C. W. Lloyd, John Carmount, John Gumbert, William Caldwell and others insisted that there was no desire to strike. Some of them had gone through the troubles of 1893, and said that they had experienced enough hardships to satisfy them." J. F. McIntyre, a roller (and later the burgess of Vandergrift Borough), so doubted the ability of the union to organize that he said he would give ten dollars for every man at the Vandergrift mill that the Amalgamated could get to join.[23]

A copy of the *Commercial-Gazette* article appeared in the *Amalgamated Journal*, but with the following conclusion: "These men are the tools of their bosses and talked thus to please them. If they were in some other town and among union men they would talk just the other way."[24]

Vandergrift's Role in the 1901 Strike

In the meantime, the labor troubles had spread to the mills of another U.S. Steel subsidiary, American Tin Plate. Despite American Tin Plate's willingness to sign the wage scale for its mills at the June conference, Shaffer, the Amalgamated's president, called tin workers out in the middle of July, based on a clause in article 35 in the Amalgamated constitution: "Should one mill in a combine or trust have a difficulty all mills in said combine or trust shall cease work until such grievance is settled." The more immediate reason for the strike against American Tin Plate, however, was that all but one of the subsidiary's works (Monessen) were unionized. If union workers honored the strike, production within an entire subsidiary of U.S. Steel would cease and the Steel Corporation would be forced to sign the new contract.[25]

Given the gravity of the situation for them, the directors of U.S. Steel decided to become actively involved. J. P. Morgan met with Shaffer in New York City on July 27. Shaffer was obviously surprised, impressed, and very much in awe of Morgan. Although one of the richest men in the United States, Morgan was approachable, and he appeared to Shaffer to be appreciative of the plight of labor. Morgan explained that he understood the union's position, but given trends within the larger economy it was in both parties' best interest to come quickly to an agreement. A long-term strike would hurt both the Steel Corporation and the workers. Morgan then made Shaffer nearly the same offer that Persifor Smith had made at the end of June: the scale would be signed for all mills that had operated as union mills in 1900–1901, plus Old Meadow and Saltsburg. McKeesport and Wellsville were not mentioned. Morgan was persuasive. Shaffer accepted.[26]

When Shaffer returned to Pittsburgh he announced to the union's executive board that the strike was settled. But when the board discovered that he had given up the two mills that Preston had offered in the middle of July, they were furious. They immediately arranged another meeting with Morgan to demand that the scale be signed for Wellsville and McKeesport. Morgan would not budge: Shaffer had accepted his offer and Morgan considered the matter closed. Wellsville and McKeesport would remain as nonunion works. A week later, on August 10, the Amalgamated's executive board had Shaffer call a general strike against all subsidiaries of U.S. Steel.

The response to the strike call was weak. Union members at many furnaces

and other Steel Corporation steelworks refused to walk off their jobs. In coming to a tentative agreement with Morgan, Shaffer and the union leadership had lost considerable credibility with the rank-and-file. Furthermore, the U.S. Steel subsidiaries were making concerted and successful efforts to operate the unionized mills with nonunion labor. During the first week in August, for instance, McMurtry's American Sheet Steel "succeeded in starting the Hyde Park mill by laying off two mills at Appolo [*sic*] and two at Vandergrift and taking the crews to that place, which is only a few miles from Vandergrift." The experienced crews from Apollo and Vandergrift then began to train nonunion workers who had been promoted from the Hyde Park ranks of clerks, operatives, and laborers. Later in August, the same tactics were used at other American Sheet Steel mills. The *Amalgamated Journal* stated that "the few men that have been inveigled into their [American Sheet Steel's] mills to help break the strike in Wellsville are from the forsaken places called Vandergrift, Leechburg and Scottdale."[27]

By the middle of August, it was clear that the Amalgamated was losing ground in the strike. After several meetings in mid-September between union representatives and U.S. Steel's Charles Schwab, Carnegie Steel's W. T. Corey, American Tin Plate's William Graham, American Sheet Steel's George McMurtry, and Veryl Preston, the strike was settled. In the process, the Amalgamated lost not just Old Meadow and Saltsburg but thirteen additional mills. And of those that remained unionized at the end of the strike, several were soon dismantled. In the union's final analysis, the Amalgamated concluded that "if the men at Vandergrift, Leechburgh [*sic*], Scottdale and Saltsburg had joined in the effort to get [union] recognition instead of helping the trust to break our strike which was really started with a view of freeing them from non-union conditions the strike would have been won by the Association." In a historical analysis of the strike, however, David Brody argues: "Not merely falling short of its objective, the Amalgamated Association found its basis of strength, seemingly secure at the outset, shattered by the strike's end. It was a settlement from which the union never recovered."[28]

McMurtry Vindicated

McMurtry had obviously irritated the executive committee of U.S. Steel during the 1901 labor dispute. But at the same time, he successfully used the same strategies that he had used in 1893 Apollo to break the 1901 strike. He had locked out union workers and trained nonunion workers as replacements. More

importantly, McMurtry's handpicked Vandergrift and Apollo nonunion workforce helped implement the strategy. The end result was a reassertion of the power of capital over organized labor. This fact prompted American Sheet Steel and *Iron Age*, the major iron-and-steel industry trade paper, to boast afterward about the strike's failure and to brag particularly (in two separate articles) about the success of a place such as Vandergrift.

Unlike previous articles on Vandergrift, however, much of the focus was placed upon McMurtry. Moreover, the tone of both articles was defensive, as if to justify the idea of a model industrial town and the tactics that McMurtry used to cultivate a nonunion workforce. One article said of McMurtry's role in the 1901 strike:

> His creation of a model industrial town, peopled by men untrammeled by affiliations with labor unions, has, however, now brought to him the crowning vindication. His men have stood by him, and by the principle of frank and cordial relations between employer and employed. The men of Vandergrift have practically unanimously continued to work. The influence of the example in the valley of which it is the fairest gem has been such that it harbors a group of non-union works which have proved of the greatest importance to the large organization, and have to some extent been the nursery of skilled men for other plants. With such a splendid proof of the value of an industrial town laid out on modern lines, and of a management fostering close relations with the men based on absolutely fair dealing, it is to be hoped that in the future Vandergrift will have the distinction of being only the oldest of a series of similar communities.[29]

Later, in November, a seven-page supplement to *Iron Age* that included photographs of McMurtry, the mill, houses and streets of Vandergrift Borough, and a more explicit statement of McMurtry's labor policy justified McMurtry's actions again:

> The works at Vandergrift are free works, no union rules being tolerated. The consequence is that the lucrative positions in the works are open to all who show fitness. It may be said that civil service applies here. If a new roller is needed, a man from some subordinate position is promoted. No union is permitted to send an unknown man from another mill, to keep the craft of rolling confined to a select circle. The same methods apply throughout all departments. Men are advanced as they display merit or special aptitude, and worth receives its proper recognition. It is not surprising that men working under these conditions and with these sur-

> roundings were unwilling to strike when the effort was made to "call" them out last summer. Among such men agitators and fomenters of strife can obtain no foothold. All this has largely been due to the personal influences of George G. McMurtry, president of the company, whose genius for executive responsibilities was so signally demonstrated in the growth of the Apollo works.[30]

That same month, Charles Schwab, U.S. Steel's president, and other officials of American Sheet Steel visited Vandergrift with McMurtry so that Schwab could see firsthand the basis for McMurtry's success. During that visit, as the local newspaper reported, "President Schwab praised the town, the homes, the people and the works which made the town, saying that he was not able to decide whether it was the good town, good homes and good people that made the good works or vice versa."[31] The following year (October 1902), the accolades were voiced again, but this time by the people of Vandergrift. During a trip from New York City to Pittsburgh, McMurtry stopped in Vandergrift long enough for employees of the Vandergrift mill to present him with a $5,000 sterling silver punch bowl made by Tiffany & Co. (fig. 5.1). The bowl, engraved with McMurtry's portrait, bore a eulogy:

> A lovable character and possessor of many noble qualities, who, by his generous deeds, has proved himself a true friend of the workingman.[32]

At the presentation ceremony, steelworker Joseph Daugherty spoke again, this time on behalf of the Vandergrift mill's workforce:

> Here . . . upon this platform, stand the two great factors in human existence—Capital and Labor—the one just as important as the other; the one cannot survive without the other; but on this we will not dwell. Let us look rather to the relations existing between them; capital on the one hand doing all it can to promote the interest of the laboring classes, by paying good wages, giving steady employment, encouraging them to build and own their own homes and educate their children; labor, on the other hand, by sobriety, industry and the careful handling of the trust reposed in her, is doing much to advance the interest of capital, no strife, no envying, but all is at peace and harmony, each endeavoring to do whatever is possible to help the other. What an inspiring sight, what a valuable lesson, to those who's interest has been only for self, and who have never weighed the question of mutuality. Then, best of all, we remember that this is no new experiment, indeed it has passed the experimental stage, it has been proven and tried by years of experience, it has stood the test of times prosperous and times of peril, and love is the se-

Fig. 5.1. McMurtry's loving cup punch bowl. Made by Tiffany & Company, of New York, the bowl now resides at the Historical Society of Western Pennsylvania as a gift from George McMurtry Sr.'s granddaughter Louise McMurtry Anderson. (Photo reprinted with permission of the Library and Archives Division, Historical Society of Western Pennsylvania.)

> cret of it all, the employers love for his workmen, the workmens [*sic*] love for their employers and managers.

Daugherty quoted the eulogy engraved on the loving cup, and his words appeared to have touched McMurtry deeply.[33] He had Bache, his secretary, announce—on the spot—that McMurtry would "give to each and every church in Vandergrift, regardless of denomination, a pipe organ."[34]

During the summer of 1901, at the height of the tensions between U.S. Steel and the Amalgamated, the executive committee of U.S. Steel may have felt less than positive about McMurtry because of his tendency to act independently. But

McMurtry proved himself by controlling so successfully the production process as well as the workforces in his mills. McMurtry had been able to shunt workers around American Sheet Steel as needed and, moreover, had fostered nonunion sentiments in the minds of workers at the largest plant in the system he oversaw. Because of his efforts in creating a model industrial town, he had convinced Vandergrift workers that unions were unnecessary to achieve good working and living conditions. And in return, one of the ideals embedded in the Vandergrift plan—workforce loyalty—had become a reality. Two other ideals, however—American-ness and home ownership—were sullied after 1900 by societal, economic, and political changes far beyond the control of the town's creators or inhabitants.

CHAPTER SIX

Growing Pains for the "Model Town"

In the fifteen years following the 1901 steel strike, Vandergrift's residents adjusted to a new set of realities. With Apollo Iron and Steel's purchase by American Sheet Steel and subsequent absorption by U.S. Steel, the mill became one of many satellite production facilities in a larger corporate constellation. McMurtry had less time for the place, now that he and Clara had moved their household to New York City and he was occupied with placating U.S. Steel's board as well as nearly two dozen on-site mill managers thoughout the northeastern United States. With each expansion of Vandergrift's mill there also arose a greater need for unskilled labor, and with that arrived, fresh from Ellis Island, throngs of immigrants from East, South, and Central Europe. Vandergrift, Vandergrift Heights, East Vandergrift, and yet another settlement, North Vandergrift, soon found themselves having to grapple with many sorts of social and political problems and without the benefit of the steel company's intervention. Gradually, the ideals embedded in McMurtry's original Vandergrift agenda—American-ness, home ownership, the nuclear family, a well-ordered urban environment—all had been sullied by immigration, rampant real-estate speculation, and rapid urban growth. Apart from Vandergrift Borough's curvilinear streets,

the Vandergrift settlements eventually came to resemble Apollo and most other southwestern Pennsylvania steel towns—physically. However, when it came to the town's political culture, little had changed—as became apparent when labor organizers targeted Vandergrift's mill for another unionization attempt during the steel strike of 1909. The workforce and the town's reaction would ultimately influence public and corporate opinion about Vandergrift, McMurtry, and U.S. Steel for years to come.

Adjusting to Life as Part of Big Steel

Industrial restructuring—mainly the addition of new equipment and unskilled and clerical workers—generated many changes on the Vandergrift peninsula during the 1900s and 1910s. Late in 1901, American Sheet Steel installed eight new rolling machines, bringing the total to twenty-nine. The *Iron Age* reported that the corporation intended to make the works a "fifty-mill" plant. Between 1898 and 1912, the corporation also expanded the three-furnace open-hearth department to nine furnaces with a combined furnace capacity of six hundred gross tons per heat. It also transferred to Vandergrift the entire galvanizing plant and workforce of galvanizers, annealers, and supporting laborers from the old Apollo mill. After that, "all sheets intended to be galvanized [were] brought to the Vandergrift plant from the other works of the American Sheet Steel Company in the Kiskiminetas Valley, located at Apollo, Leechburg, Saltsburg and Hyde Park."[1]

In the absence of U.S. Steel employment records, it is difficult to ascertain the exact impacts that the mill's expansion had on the occupational structure of the workforce. Only one published account from the 1910s gives so much as the number employed in the works. According to *Leslie's Weekly*, 3,418 men were employed in the Vandergrift mill in May 1912. Aggregated census figures from the federal manuscript census nevertheless give some sense of the demographic impact that mill expansion and the establishment of another firm, United Foundries, had upon the entire peninsula. Population nearly doubled, as did the size of the workforce.[2] Absolute increases in the number of workers employed in key occupations such as roller, melter, and ladleman paralleled the expansion of the existing sheet-mill and open-hearth departments. Moreover, the deskilling of the workforce that started in the 1870s and 1880s continued with the growing proportional influence of semiskilled workers and laborers due to the increase in mill capacity (table 6.1). The newly expanded galvanizing depart-

Table 6.1 Occupational Structure of Apollo, Vandergrift, Vandergrift Heights, and East Vandergrift, 1910

Occupation	Apollo %	Vandergrift %	Vandergrift Heights %	East Vandergrift %
Managers[1]	16	11	6	2
Service[2]	22	22	9	5
Craftsworkers	18	27	13	7
Operatives	28	31	35	25
Laborers	19	9	36	61
Farmers	trace	trace	trace	trace
Total number employed	1,135	1,720	1,404	1,029
% of town population employed outside the home	38	44	41	56

1. Includes officials, proprietors, and professionals.
2. Includes clerical, sales, and service workers.

Source: U.S. Department of Commerce, Bureau of the Census, *Thirteenth Census, 1910: Population Manuscripts*, Pennsylvania, Armstrong County, Westmoreland County.

ment, "where the character of the work is distasteful to men fitted for a more skilled vocation," employed many of the recently arrived, unskilled immigrant laborers.[3]

Workforce expansion in turn generated new demands for residential and commercial property, demands that the Vandergrift Land and Improvement Company eagerly met in Vandergrift and Vandergrift Heights. Between 1900 and 1910, the company sold at least three hundred lots in the Olmsted plan and more than two hundred in Vandergrift Heights. Furthermore, additional residential districts were platted and developed by locally based firms. Frank C. Jones, a Vandergrift resident who was a civil engineer and building contractor, developed the forty-two lot Hartley Addition (1901) adjoining Vandergrift. The Realty Plan, located due south of the Hartley Addition, was developed in 1906 by the Vandergrift Realty Company (merchants Van T. Shepler, S. W. Hamilton, and Harry Culp) and made 116 lots available to buyers (fig. 6.1). As in the Olmsted plan, sewer and water systems were installed before lots went on sale. Lots cost $1,000.[4]

Notably, these plans set out a much different residential configuration from the one envisioned by the original Olmsted plan: their developers discarded the

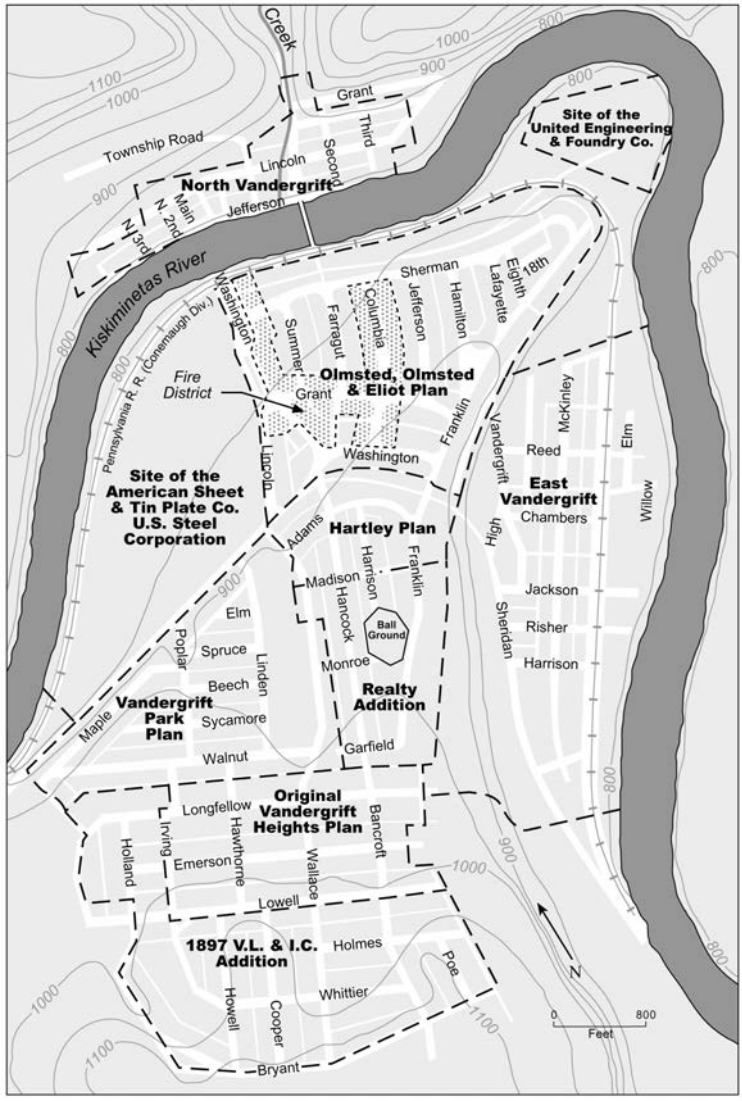

Fig. 6.1. Vandergrift, 1915. The fire district approximates the limits of the 1910s business district in the Olmsted plan. By 1915, half of the Village Green had been vacated by Vandergrift Borough and ceded to the steel company. In the 1990s, the Washington-Lincoln park that ran along the railroad station-Casino axis served as a parking lot. (After a map by the Sanborn Map Company.)

curvilinear Olmstedian landscape that was to connect the lower town and the Heights in favor of a rectilinear street plan. The exact reason for this decision is unknown, but there are two plausible explanations. Despite the financial stature of the developers, their Vandergrift Realty Company probably did not have the kind of resources that McMurtry could muster for the original development. Furthermore, had they developed the lots as McMurtry had done, the cost would have been passed to buyers through inflated lot prices. Although the occupational group who could most easily afford to buy into such a new development—skilled craftsworkers—was still growing, in absolute terms, the need for single-family, owner-occupied housing now came from the young clerical workers and operatives who had grown up in (and with) Vandergrift. Under an Olmstedian-type plan these occupational groups, unable to afford the payments, might have been excluded. Rather than pricing lots off the market, it was better for the Vandergrift Realty Company to aim for the middle range of buyers.

Despite the addition of the Realty Plan after 1906 and the residential infilling that occurred on Vandergrift lots, the proportion of homeowners within Vandergrift between 1900 and 1910 increased only modestly, from 50 to 55 percent. The only major development was a decrease in the percentage of property owners who held mortgages, from 62 to 50 percent: owners who had purchased their property in the 1890s with the help of a mortgage now owned their property freehold. Moreover, renting persisted—especially along Sumner, Farragut, and Sherman Avenues.[5]

That the proportion of homeowners to renters remained relatively stable does not mean that the property market was motionless after the VL&I sold its lots. Some houses were sold from one owner-occupier to another; others bounced back and forth in status from rental to owned properties. In 1899, for instance, roller James Whitehead purchased three lots at the corner of Grant and Jefferson Avenue from the company. He erected houses on the two end lots and left the middle lot vacant. According to the 1900 census, Whitehead, his wife, and four children lived in one of the houses and rented the other to a roll-turner, who occupied it with his wife and child. Two years later, Whitehead sold one and one-half of his three lots and the second house to barber Salathiel and Lizzie McGaughey. The McGaugheys apparently lived in the house for two years and then sold it to Sarah E. Mulholland. After Mrs. Mulholland died, in 1908, her five heirs sold their interest in the property to a brother, heater William Mulholland, for $250. When Mulholland moved to Mount Ida, Arkansas, in 1912, he sold the property back to James Whitehead.[6] Some owners, how-

ever, when they moved away from the town held onto their property. The widow of first-day buyer John F. Detar still owned the houses her husband had erected on their Grant Avenue lot but she had since moved to Tarentum, Pennsylvania. In 1910, she rented the front house to a mill superintendent and the back house to a semiskilled doubler. In 1910, at least forty-three other nonresidents owned almost 7 percent of Vandergrift's lots.[7]

With property turnovers and absentee property holding, there was a distancing from McMurtry's 1895 ideal of a town owned and populated by "American" workmen. Indeed, craftsmen and merchants displayed a greater tendency to own property than other occupational groups (even within these categories there were substantial numbers of renters). Although most Vandergrift landlords appear to have been discriminating in their choice of renters, absentee landlords (or landlords who lived several blocks away from their rental property) did not seem to care who occupied their property so long as they received rents, even if the ethnic identity of tenants went against the ideal of American-ness. The properties belonging to J. H. Goldstrom of Butler, Pennsylvania, Jonathan Walters, of Vandergrift, and Sprague T. Martin, of Apollo, were cases in point.

In 1897, Goldstrom—listed in the 1900 manuscript census for Vandergrift as a butcher—purchased first-day buyer Harry P. Beck's one and one-half lots on Columbia Avenue (127–29 Columbia) for $1,600. Before he moved away from Vandergrift (sometime between 1900 and 1910), Goldstrom erected a two-story frame building on the property. The ground floor housed a butcher shop and the second floor was an apartment. In 1910, he rented the apartment to a Greek immigrant who gave his occupation to the census enumerator as "farmer." Five Greek laborers and one machinist roomed with the farmer; none were related and none had been in the United States for longer than seven years. Next door at 131 Columbia, roller Jonathan Walters (who lived on Grant Avenue) erected a two-story store/apartment. He rented the second floor to a Russian Polish family of three who ran a boardinghouse that accommodated fifteen Hungarian-Slovenian laborers. None of Walters's tenants were U.S. citizens, and only two had been in the United States for more than five years. Sprague T. Martin was another former Vandergrift resident. A heater and first-day buyer, Martin owned a frame building, 133 Columbia, on the lot adjacent to Walters's property. The building housed a grocery store and a boardinghouse occupied by two Greek merchants and seven Greek laborers. These three properties, along with seven other boardinghouses on Columbia, formed the core of emerging Greek and East European communities in Vandergrift Borough.[8]

Table 6.2 Birthplaces of Employed Population, Percentages, 1910

Birthplace	Apollo %	Vandergrift %	Vandergrift Heights %	East Vandergrift %
Pennsylvania	84	82	59	6
U.S./non-Pennsylvania	7	3	2	trace
Northwest Europe	3	5	3	trace
East/Central Europe	1	2	4	88
Southern Europe	4	8	32	5
Other	trace	trace	0	0
Total number employed	1,135	1,720	1,404	1,029

Source: U.S. Department of Commerce, Bureau of the Census, *Thirteenth Census, 1910: Population Manuscripts*, Pennsylvania, Armstrong County, Westmoreland County.

The presence of the Greeks and East Europeans in Vandergrift did not go unnoticed. The percentage of foreign-born employed people living in Vandergrift was only 16 percent of the total employed population (compared with 39% in Vandergrift Heights and 93% in East Vandergrift), but Vandergrift Borough residents were worried about the recent influx of immigrants from South, Central, and East Europe (table 6.2). In 1906, Vandergrift Borough council decided to employ only "American labor" on the streets of Vandergrift, "if it could be secured." Willing to pay an hourly wage equivalent to that paid to laborers in the mill, they were hard-pressed to meet this preference.[9]

In September 1911, the borough hired a Greek, an East European, and two Italians at sixteen cents per hour to paint a bridge and sweep the streets. That same year, two Columbia Avenue resident property owners complained to the council about "the conduct of certain 'Greeks' establishments near their places." In 1912 the council was asked to investigate an allegation that a Greek restaurant at 143 Columbia was really a "disorderly house"; even the constable had been seen "conniving" [*sic*] there. Two years later, in April 1914, J. A. Hoffman, W. A. Bittinger, and George Calogrides complained to the council "about the Greek coffee houses on Columbia Ave. adjoining their homes, they were willing to satisfy council that these places or coffee houses as they are called are a nuisance." Both the council and the burgess promised that they would look into the matter and perhaps even have the coffee houses banned. Two months later, the council instructed the burgess "to clean up any house occupied by Greeks, Turks, or any other nationaly [*sic*], on Columbia Ave, or any other place in the Borough,

who have been maintaining a disordaly [*sic*] house, by card playing, dancing, music, and other boisterous conducts; remove all card tables, curtains from the front windows; and use the police force to make this clean up in three days and stop all."[10]

The borough and its residents eventually accepted the new social reality of Vandergrift: the steelworks acted like a magnet in attracting European immigrants. Given its labor requirements, it offered hundreds of low-paying unskilled jobs to workers with no previous industrial experience. For management, immigrants were vital to the operation of the mill.[11] Not that young American workers—James Whitehead's son John, for example—did not continue to follow their roller and heater fathers into the mill. They did so, just as British puddlers' sons had done in Apollo and Leechburg in the 1870s and 1880s. But instead of learning their fathers' crafts and serving as "helpers" and laborers around the furnaces or rolls, many started as lower-paid, semiskilled operatives or clerical workers. Rollers' and heaters' sons thus became openers, catchers, matchers, clerks, and timekeepers. They filled semiskilled positions that contributed not only to the de-skilling but also to the growth of the white-collar workforce. Women also played a more important role in the white-collar workforce than they had in 1900.[12] As a consequence, immigrant workers who arrived in the United States with nothing but their labor power filled a need for unskilled labor that had been heightened by de-skilling and the movement of Americans up the wage hierarchy. All that the residents of Vandergrift could do was maintain as much distance as possible from the immigrants and learn to adjust.

One coping mechanism they developed made East Vandergrift immigrant residents the butt of jokes and reinforced emerging stereotypes about the "hunkies" down on the flat. The following article appeared in the *Vandergrift Citizen* on February 28, 1916:

> HORRIBLE SCENE ON SHERMAN AVENUE THIS MORNING.
>
> HORSE AND SCHOOL CHILDREN IN MIX-UP
>
> As Alex Stofus of East Vandergrift was going to the Beck Mine for a load of coal and about half way across the bridge, he noticed some long object laying close to the pipe line that crosses to North Vandergrift. It looked to Mr. Stofus like a large snake. Getting out of his wagon Mr. Stofus investigated and found to his surprise that it was a huge boa constructor [*sic*] presumably the one that escaped from the Carnival last season. Mr. Stofus thought the snake was frozen, but with a kick in

> the center of its body, the snake began to squirm and in an instant had coiled itself around one of the horses. Under its tightening grip and frantic fear the horse fell. At that moment the snake released its grip and started toward the Vandergrift end of the bridge. Children from the Sherman Avenue School were just passing and some of them almost stepped on the monster before they realized what it was. One child was knocked down in the melee and the snake passed entirely over its body, but did no harm. The terror stricken shrieks of the children brought many people to the scene, but the more timid ones ran to their homes and closed the doors.
>
> With clubs and sticks some men were about to kill the snake when with a hissing sound it threw its body into a coil and sprang right in the midst of the—Dear reader this is only an imaginary story on the part of the writer. If such a thing should actually happen, it would be no more thrilling than the announcement of SUTTON & FLUDE [Clothing, Shoes and Men's Furnishings] Co's 25th Anniversary Sale which starts next week. Look for later announcement.[13]

The ethnic and occupational differences between Vandergrift Borough, Vandergrift Heights, and East Vandergrift, apparent in 1900, were even more striking in 1910. Property values in Vandergrift Borough, Vandergrift Heights, and East Vandergrift continued to enhance the social and spatial separation of Americans from the newly arrived. On a wage of sixteen cents an hour, Italian or East European laborers, unable to buy or rent, could not live in Vandergrift unless they happened to secure a place in one of the ethnic boardinghouses. East European laborers went to East Vandergrift and Italian laborers and operatives and the more prosperous East Europeans moved to the Heights, a place they continued to share with established Pennsylvanians. But over time, many East Europeans moved up the ranks from laborers to become operatives and merchants. As their affluence grew, they began to form ethnic church congregations, building societies, and social clubs. They made the same social and economic commitments to Morning Sun/East Vandergrift and the Heights that Americans had made to Vandergrift Borough and Vandergrift Heights. A public school was established on the flat in 1898 and Morning Sun was incorporated as the Borough of East Vandergrift in 1901. An early sign of East Vandergrift's emergence as an East European community had been the organization of a Roman Catholic parish—Holy Trinity—by the Slovaks in 1909. Separate Lithuanian and Polish parishes were organized in 1922.

Vandergrift Heights residents expressed their own commitment to their hometown in their willingness to give up some political autonomy in 1915 in or-

der to have better garbage service, police protection, adequate sewerage, and paved streets. Municipal consolidation with Vandergrift Borough would enhance the quality of life and would protect Vandergrift Heights property as an investment. Vandergrift residents were not overwhelmingly sold on the idea, however. Although Vandergrift Borough councilmen would get a voice in the resolution of problems in the Heights that had an impact on the lower part of town, consolidation also meant that Vandergrift Borough taxpayers would underwrite the provision of municipal services in the Heights. When the consolidation issue was put before Vandergrift Borough voters in June 1915, it passed by only two votes (223 to 221).[14]

The Borough Council Copes with Growth

The third council meeting after the consolidation of Vandergrift and Vandergrift Heights (September 6, 1915) started like every regular monthly meeting. The council president was Van T. Shepler, the developer and Vandergrift merchant. He called the meeting to order and the roll was taken. Thirteen councilmen were present (a fourteenth had tendered his resignation for reasons unknown). R. C. Detwiler, council secretary and clerk at the Vandergrift steel mill, read the minutes, which were approved, and then, as was customary, the regular order of business was suspended to allow the council to hear from "visitors."[15] The issues raised before council that evening were not peculiar when compared with other meetings or when compared to other places. Nor was the council's response to them.[16] The council took no action on garbage hauler A. E. Miller's complaint that he was being underpaid by seventy cents per day for garbage collection in the Park Plan. Ed Borland and John Hill requested that council do something about the surface and sewer water that was running over their property at the east end of Longfellow Street in the Heights. They also asked that the council decide on the street grade so they could lay a sidewalk. Shepler referred the matter to the council's street committee. No further action was taken. Emma Beilstein was granted special permission to build a porch and pantry on the back of her house on Columbia Avenue.

These issues are suggestive of the problems that population growth created in Vandergrift and Vandergrift Heights after 1900. As new residents moved in and more territory was annexed into the two boroughs, the demands placed on the infrastructure often exceeded its capacity. As a result, Vandergrift Borough devised a new garbage collection and disposal system to handle greater amounts

of domestic refuse, the council purchased a new truck for the fire company, paving programs were instituted to improve the alleys as deliveryways and thoroughfares, while the integration of new subdivisions into the existing sewer system required a complete reconstruction of several of the mains in the Olmsted plan. Despite the Apollo Iron and Steel promises in *Vandergrift Ready* about the efficiency and collective financial benefits of a town with ready-made infrastructure, the cost of system improvements far outweighed tax revenues. In 1899, the council began to compensate for fiscal shortfalls by borrowing money from the Trust National Bank of Vandergrift.[17]

In general, the council was prudent—and somewhat tentative—in making spending decisions. Matters were often laid over to the next meeting, giving councilmen a chance to investigate the situation. In 1903, for instance, the council debated for several meetings how to pay for the construction of a borough building/fire hall. The council decided to raise $11,000 through the municipal bond market.[18] When it came to dealing with the impacts of population growth, however, the council was much more willing to act immediately. The council's task in this area was to set up a legal framework of ordinances that would protect property (and property values) from the spill-over effects of disagreeable land uses and to debate variances to such ordinances. In 1898, on the basis of one discussion, the Vandergrift Borough council created a "fire district" that included the commercial portions of Washington, Grant, and Columbia Avenues. All new buildings within this district were to be made of stone or brick and residents who planned to make additions to existing structures or who wanted to build frame structures had to obtain the council's permission. The fire-district ordinance, however, was frequently called into question or disobeyed, indicating that not all residents deemed it appropriate. A year after the ordinance was enacted, it was amended to allow property owners to build frame houses on the rear of their lots.[19]

Those were issues in Vandergrift Borough. Whether or not similar matters and actions occupied the Heights and its council in the years before consolidation is unknown. Postconsolidation council minutes are suggestive, however, of some of the concerns that the Heights encountered. It is clear that the largest municipal problem in the Heights was service provision; Heights residents lobbied their council to pave the streets, build a sewer system, and improve garbage collection. In essence, they wanted the Heights borough to provide the same types of infrastructure that McMurtry originally provided in Vandergrift Borough. In 1900, for instance, public sentiment—in tandem with a limited tax

base—forced a representative of Vandergrift Heights Borough to meet with the borough council of Vandergrift about building a jointly owned "garbage furnace." The matter was not acted upon for a decade, but such issues were common enough in 1914 to encourage the Heights borough council to approach Vandergrift Borough about consolidation.[20]

After the Vandergrift council had deliberated the issues presented by visitors at the September 1915 meeting, the regular order of business was resumed and the tax collector and treasurer presented their reports and all bills and payments were approved. As part of the municipal reorganization that went along with consolidation, five members of the municipal board of health submitted their resignations in order to reduce the board's size to five. The secretary read the correspondence received since the last meeting; the council discussed hiring a school truant officer; and an October reunion was planned for the 78th, 101st, and 103rd regiments of Pennsylvania Volunteers who fought in the Civil War. The meeting then deviated from its customary course. President Shepler read the following resolution:

> WHEREAS, George G. McMurtry, the founder of the Vandergrift Works and the towns of Vandergrift and Vandergrift Heights, died on the 5th day of August 1915, and
>
> WHEREAS, During his lifetime he was active in promoting the welfare of the workmen of Vandergrift and the Kiskiminetas Valley, by furnishing them work at remunerative wages and under the best conditions possible for decent and honorable living and thus endearing himself to all of the people:
>
> THEREFORE BE IT RESOLVED, by the Burgess and Council of Vandergrift, Westmoreland County, Pennsylvania, that the right be granted in perpetuity to the people of Vandergrift to place in the Public Park on Washington Avenue, Vandergrift, Pa., subject to the rights of the Vandergrift Land and Improvement Co., to erect a stature [*sic*] as a memorial to the said George G. McMurtry, and when so placed the same shall be under the control of the Council of said Borough of Vandergrift forever.
>
> Enacted into law in Council this 6th day of September A.D. 1915.

Diverging Opinions about McMurtry and Vandergrift

George McMurtry died in Atlantic City, New Jersey, at the age of seventy-nine, following a two-month illness. McMurtry and his wife, Clara, had moved

to New York City in 1899 after he became president of the American Sheet Steel Company. Over the next fifteen years, McMurtry was actively involved in the operation of this consolidated company and its successor, American Sheet and Tin Plate—a subsidiary of the United States Steel Corporation. He also sat on the board of directors of the American Can Company; the Chicago, Rock Island and Pacific Railway; and the Pittsburgh Trust Company.[21]

Despite the redirection of his business affairs away from Vandergrift in his later career, now—in September 1915—Shepler, the council president, proposed that McMurtry be memorialized in Vandergrift one last time. The resolution did not immediately pass, however. Although secretary Detwiler did not record the details of the debate, it is clear there was dissention among council members over putting up a statue. J. A. Boale moved that the resolution be held over for more discussion. Vandergrift Heights resident A. J. Allison, an architect, seconded the motion, which was carried. Some council members continued to insist that the matter could not wait and had to be acted upon immediately. In a breach of parliamentary order, the original motion to erect a statue was put to a vote again. This time it carried unanimously. Amid confusion and vacillation, the borough had decided to erect a statue to McMurtry.[22]

The McMurtry statue proposition was not unique. Moves to erect public edifices and memorials had been made in Vandergrift before and would be made in the future. In 1908, the council authorized the construction of a bandstand at the intersection of Hamilton and Franklin Avenues. In 1917, it erected flagpoles on VL&I property. A resolution that created a bronze roll of remembrance for those who died in World War I was passed in 1919, as was a proposition that allowed the Vandergrift Boy Scout troop to plant a white oak in memorial to President Theodore Roosevelt. In each of these instances, the council appointed a committee to investigate the project, purchase the necessary commemorative items, and arrange the dedication. The McMurtry resolution, however, was not handled in the normal way. In fact, it was not handled at all. Although the council approved having a statue, no committee was appointed; nor was there any subsequent mention of the issue in the council minutes. The borough did not erect a statue.[23]

At the time that the McMurtry resolution was passed, the newly consolidated borough was unquestionably stretched to its financial limits in infrastructure building and rebuilding and could not justify the expense of a statue. But there may also have been opposition by some council members on ideological grounds. While McMurtry's deeds in the creation of Vandergrift could be in-

terpreted as benevolent, noble, and generous, not everyone in the Kiskiminetas Valley saw him in such a positive light. Because of McMurtry's role as chairman of American Sheet Steel and then of American Sheet and Tin Plate, his influence spanned the industrial Northeast. He contributed to the development of corporate, system-wide labor policies as the company made decisions concerning acquisitions and plant closures. American Sheet and Tin Plate's corporate practices thus affected the development of dozens of steel towns—for better and for worse. To most of the residents in these places, McMurtry was probably one of the faceless individuals who "ran" the steel corporation. However, in the Kiskiminetas Valley, McMurtry was well known because of his high profile in Apollo and Vandergrift during the 1890s.

In the *History of Armstrong County, Pennsylvania*, a county history commissioned by residents, McMurtry was said to have "practically wrecked" the Apollo mill when most of the operations were moved to Vandergrift. His company also acquired and dismantled the old Laufman mill (which was still unionized) and sold the old, outmoded Apollo Iron and Steel Works at Apollo. In 1902, this mill was dismantled. Hundreds of iron and steelworkers in Apollo and the surrounding townships then faced the same undesirable personal options that puddlers and unionized rollers faced during the earlier rounds of industrial restructuring in the 1880s and 1890s: unemployment, moving to other mill towns where jobs were available, commuting, or seeking another line of employment. For Apollo, these plant closures were a "severe blow to the town": "Business houses were closing and people were removing from town. Real estate values were declining and predictions of ultimate disaster were frequently heard. The future of the community looked dark and many faint hearts trembled at the prospects."

It would be understandable if Apollo's bitterness about U.S. Steel corporate policy was directed at the one U.S. Steel official known to the community by name and previous deeds: McMurtry. In 1896, McMurtry told Apollo residents that "we [Apollo Iron and Steel] are bound by an unwritten law not to remove these [Apollo's] mills after the workmen have built up their homes at this place [Vandergrift]." Six years later, the town had lost both its steel mill and its iron mill. An Apollo-based syndicate of businessmen later purchased the old Apollo mill site and raised the funds to build mills for the Apollo Steel Company in 1913 and Apollo Electric Steel Company in 1916, but Apollo residents still remembered the decade in which they saw their lifeblood drained away by Vandergrift and its sibling upstart communities. In the 1900s much of Apollo's residential

landscape had become dormitory rental houses, owned by Vandergrift residents and occupied by semiskilled operatives and African Americans who worked at the Vandergrift mill.[24]

Even some Vandergrift residents soured in their attitude toward McMurtry, at least temporarily, after he departed for New York City. Such residents questioned their ability to function independently and maintain the model industrial town in the face of rapid population growth, immigration, the integration of Vandergrift within a larger corporate system (American Sheet Steel and U.S. Steel), the reappearance of unions and labor unrest, and the growing need for housing and infrastructure. In 1915, one Vandergrift resident reminisced about the impact of the 1899 and 1901 corporate mergers on Vandergrift: "When Vandergrift was taken over by Big Business, there was a fear in many a heart that its days of independence were over. 'It was like a funeral,' a man who had been in the place from the start told me. 'We didn't know what would happen to us.'" Some Vandergrift residents obviously believed that McMurtry had abandoned the town.[25] But although McMurtry had "left" town, Vandergrift did have the ability to be "independent." When Ida Tarbell visited in 1915, she found a place where the town council was making decisions and discussing issues typical of most small communities. Furthermore, new businesses and manufacturing concerns were locating in the town and local residents were taking charge of further real-estate development. During the 1900s, therefore, Vandergrift could be assessed positively as a place that turned out as McMurtry had wanted. Residents were loyal to the steel company and as a community were able to look after their own affairs. Organized labor, however, had constructed a negative interpretation of Vandergrift. They considered it "hell."

Parallel to, and intertwined with, the emergence of Vandergrift as a place was the emergence of Vandergrift as a set of "images"—sets of attitudes about the town that were held by the steel company, residents, workers, and outside observers. McMurtry and Apollo Iron and Steel created the first image. McMurtry based it on what he knew in the early 1890s of urban industrial conditions, company towns, and model towns. He wanted Vandergrift to compare favorably. Apollo Iron and Steel's board of directors fine-tuned this image to fit their economic goals: to produce steel as profitably as possible without interruption by strikes and other labor disputes. Thus the initial image of Vandergrift was of a place that would provide the best possible urban setting in which to operate profitably a nonunion steelworks.

For Vandergrift to be a success, however, it had to be sold, both literally and

figuratively, to workingmen and their families. The Vandergrift image was further adjusted to lure workers and investors to Vandergrift. Through two promotional publications, one published as lots went on sale in 1896 and the other describing the progress made by 1900, McMurtry and the Vandergrift Land and Improvement Company portrayed a town that was not only a sound investment but also a good place to live—in short, a "Workingman's Paradise." Moreover, three lengthy and anonymously written articles that appeared in 1896, 1897, and 1901 in the *Iron Age* and *American Construction and Building News*, painted Vandergrift as a practical solution to problems of labor management. Capital could use Vandergrift as a model: If manufacturers could foster pride of place and encourage home ownership, then workers would respond: they would take responsibility for the development of their community and they would be loyal to their employer. Thus, within the earliest (positive) image of Vandergrift were two deeply entwined "subimages": one was directed toward potential buyers and residents; the other was intended for consumption by steel producers, corporate investors, and the general public, away from Vandergrift.

After the merger of Apollo Iron and Steel into U.S. Steel in 1901, U.S. Steel used the "paradise" image for its own purposes; namely, to promote nonunionism and to justify corporate control of workers' social activities at the new model industrial city it had built at Gary, Indiana. U.S. Steel created Gary in 1906 to take advantage of proximity to Great Lakes ore, expand the corporation's production capacity, and satisfy the growing demand for steel in the Midwest. It formed two subsidiaries to carry out the task. The first, Indiana Steel, erected the largest steel mill in the United States. But the steel mill was only the nucleus of Gary's industrial base. Existing U.S. Steel subsidiaries American Bridge, American Sheet and Tin Plate, American Car and Foundry, American Locomotive Works, American Steel and Wire, National Tube, and Universal Portland Cement each located production facilities at Gary and drew their steel supply from Indiana Steel. Thus, in terms of space, Gary formed the largest concentration of vertically integrated corporate subsidiaries in the United States.[26]

The second part of U.S. Steel's Gary plan was the formation of the Gary Land Company. Similar to the Vandergrift Land and Improvement Company, the Gary company planned, surveyed, advertised, and sold residential and commercial lots on land adjacent to the mammoth industrial district. The work proceeded quickly: "By 1909, the Indiana Steel Company had produced its first steel, the Gary Land Company had laid out its First Subdivision, and real estate promoters were advertising Gary as the 'model industrial city of the world.' Pop-

ulation surpassed ten thousand by 1908, and additional thousands of workers commuted to mill or construction jobs on fifty daily interurban trains linking Chicago and Gary."[27]

From the outset, U.S. Steel (via the Gary Land Company) intended for Gary to be a larger version of Vandergrift. Based on a critique of model towns written for the widely read *Harper's Weekly* by Eugene Buffington, one of Gary's creators (he was Indiana Steel and the Gary Land Company president), it is clear that the underlying intentions behind Gary were nearly identical to those behind Vandergrift. Memories were long in the Chicago area when it came to the Pullman strike, and, analogous to Apollo Iron and Steel's efforts, Indiana Steel wanted conceptually to distance its model city plan from George Pullman's plan for a model town. Their new city would be based on an ideal that Buffington referred to in his article "Making Cities for Workmen" as "self-help": "The ability of the American workingman to work out for himself the best in the art of home-making and community regulation." U.S. Steel and the Gary Land Company would lay the groundwork for the creation of a community by providing infrastructure and ensuring that merchants moved to Gary. The inhabitants would do the rest. Buffington believed that, if capital provided "the normal wage-earner with proper opportunity to exercise self-helpfulness, . . . he will do tenfold more for himself and his family than can be done for him through any kind of benevolence."[28]

Buffington argued that the idea of self-help for workingmen had its roots in McMurtry's plan for Vandergrift and McMurtry's "faith in individualistic competence." Central to the promotion of that competence, according to Buffington, had been home ownership:

> It is estimated by an official of the [Vandergrift] Land [and Improvement] Company that between eighty-five per cent, and ninety per cent of all the homes in Vandergrift are owned by their respective occupants. Under such favorable circumstances, it is not surprising to find an unmistakable atmosphere of thrift, cleanliness, wholesomeness and content. Nor is it surprising that under such conditions of individual and collective thrift opportunity for culture and recreation is found.[29]

Buffington also applauded McMurtry for his ability to cultivate a workforce that could be entrusted with the governance and maintenance of a community. According to Buffington, McMurtry had not laid down any laws (except in prohibiting the conveyance of liquor). All laws governing the community had been achieved through community "consensus"; the people had formulated their own

ordinances for control of building setbacks, the fire district, and pig keeping. In Buffington's opinion, Vandergrift was almost a libertarian utopia.

> Here we have an exemplification of Herbert Spencer's idea of social evolution bringing about a co-ordination or conciliation "between the interests of each citizen and the interests of citizens at large, tending ever toward a state in which the two become merged in one and fall into complete concord." Thus it was that Vandergrift developed as an industrial village, with its well-paved, gracefully arranged streets, bordered on each side by attractive homes of individual design, having no monotony in appearance to give it the stamp of centralized ownership.[30]

Buffington's acknowledgment of the influence that Vandergrift had on the creation of Gary stands as testimony that Vandergrift ultimately was a *model* industrial town. Vandergrift was copied elsewhere in part or whole. McMurtry's original agenda, therefore, had met with another success.[31]

Nevertheless, Buffington failed to mention that McMurtry had, in effect, laid down some of the law in Vandergrift. Contrary to what Buffington implied, the citizens of Vandergrift had not been responsible for the provision of the "well-paved, gracefully arranged" streets. Nor had they been a party to decisions regarding the provision of a sewer system and a water supply. And while residents obviously approved of some—if not all—of the decisions that had been made for them because they bought into Vandergrift, McMurtry's decisions set the local municipal agenda for years to come. As new territory up the hill from Vandergrift was politically annexed into the borough and physically connected into the sewer system, for instance, it became painfully clear to residents that a large portion of the borough sewer system in the lower part of town would have to be reconstructed. In 1910, when VL&I wanted to develop the tract connecting the Realty Plan and Vandergrift Heights, council members remarked that the "Vandergrift sewers proper are inadequate to handle any more territory, and if the permission [is given] to connect this new property up, it would mean that the Borough would have to put in larger main sewers." Recognizing that the inevitable development of residential tracts at higher elevations would increase stormwater run-off even if new additions were not allowed to connect to the existing sewer system, sewer mains in the lower town were replaced in 1911 to handle the load. Furthermore, matters as mundane as McMurtry's choice of tree plantings had fiscal impacts to which the council could only respond. Residents frequently complained to the council that the roots of the fast-growing poplars planted by the company were causing sewers to back up into basements. More-

over, the trees were coming to the end of their limited lifetime. In 1906, the council bought forty-eight ornamental trees to replace some of the felled poplars.[32]

More important to Gary, Indiana, however, were the social implications of McMurtry's decision to provide infrastructure and a professionally rendered plan for Vandergrift. Through these decisions, McMurtry influenced the kind of families that would live in Vandergrift. When these decisions were copied at Gary, they had similar results. Most Gary dwellings "had price tags only steel company executives, white-collar workers, foremen, and highly skilled (thus highly paid) workers could afford. Housing needs for the bulk of the work force—mainly unskilled immigrant laborers—soon turned the Gary Land Company and U.S. Steel into landlords." It also turned the infrastructure-lacking northeast corner of Gary's First Subdivision into "Hunkyville"—"a cesspool of lawless men."[33]

Despite the developments in Gary, Buffington's critique of Vandergrift had a reflexive impact on the creation of other Vandergrift images. Later writers cited and emphasized many of Buffington's assessments. They argued that what set Vandergrift apart from other model towns and company towns were the ideals of self-help and home ownership. The unidentified writer of a 1910 article appearing in the *Craftsman* stated that it was unusual for "employees attached to a large industrial firm" to "own" their settlement. In addition, the author noted, employees also "governed" Vandergrift: "All the town officers are elected in the usual way and their duty is to take charge of the schools, supervise all public matters and look after the peace and good order of the community. Under these conditions it is not remarkable that the residents of the town are workingmen of the very best class."

But for the unions, the image was very different. In its campaign to organize the steel industry, the Amalgamated turned the picture of Vandergrift around to show a malevolent side to the town. During the 1901 strike, for instance, its members had called Vandergrift "God-forsaken." They painted the town in an even darker light in 1909. Gearing up after a recession that began in 1907, U.S. Steel had announced (June 1, 1909) that as of July 1 all works in the American Sheet and Tin Plate system would become nonunion works; in turn, the Amalgamated Association called a strike and began anew their attempts to organize nonunion steel mills. Vandergrift again became a focus of their efforts.

Union organizers arrived in Vandergrift on July 9, 1909. According to an affidavit filed at the end of December 1909 by one of the organizers, former Amal-

gamated president Llewellyn Lewis, the union men were told by Vandergrift union sympathizers that they would be able to meet a group of interested workers in Vandergrift Heights. In meeting with this group, the union organizers learned that American Sheet and Tin Plate had threatened Vandergrift workers with discharge if they as much as talked to the union. Lewis continued:

> We were returning to Vandergrift, Pa., when Lebanna Steele and Mr. [Job] Dunn, who were watchmen and a minor bossing job, led a mob attacking us. I tried to point out to them that we were there for the purpose of discussing the question of organization when I was struck alongside of the head with a broom handle in the hands of Steele, Mr. Dunn smashing my glasses at the same time. A number of others assaulted us. One of the men in the mob struck at Mr. Hilton with a knife. We were then taken down through the principal streets of Vandergrift by Mr. Steele and Dunn and the mob following. We were then placed on a train with a warning never to return. And up to the present time it is unsafe to enter the town, as you are in danger of being attacked at any moment.

From that moment on, the battle lines were drawn between the Amalgamated, American Sheet and Tin Plate, *and* Vandergrift. In the next issue of the *Amalgamated Journal*, a front-page article asked: "Is it a CRIME FOR UNION MEN to walk the streets of Vandergrift? It must be, when such an outrage is tolerated in broad daylight upon defenseless, law-abiding American citizens."[34]

Two weeks later, another incident occurred in Apollo. Having been ejected from Vandergrift, union organizers looked elsewhere for a place to meet with union sympathizers. On July 31, they found a vacant lot on which to meet in Apollo. That evening, Vandergrift mill superintendent Oscar Lindquist visited the organizers at their hotel:

> Lindquist said that they were not wanted there and that they would have to leave. Deponent [Robert Edwards, an organizer] claimed that they [the organizers] were exercising their rights as American citizens as guaranteed to them by law. . . . Lindquist then replied that his word was law: that he was the Scottish chief in the valley, and that what he said must go. . . . Lindquist told Edwards and his companions that he would give them one hour to get out of town and that if they failed to do so he would get them out if had to burn the hotel down.[35]

According to the general organizer of the American Federation of Labor, J. D. Pierce, Lindquist then left the hotel and found police chief John Kennedy. Lindquist "openly offered him [Kennedy] money if he would leave the place for

half an hour." By this time, "a crowd had assembled in the street outside the hotel, upward of 200 people being present; that the crowd remained about the hotel until about 12 o'clock midnight, when Burgess Steele of Apollo came to the hotel and told them that his—the burgess's—power was gone and that he could not control the crowd any longer, and they could only be appeased by the promise that the organizers would leave town the following morning, and that was the only way by which he could avert bloodshed." The next week a similar incident, allegedly perpetrated by Lindquist, forced the organizers out of Leechburg.[36]

Whether or not incidents in Vandergrift, Vandergrift Heights, Apollo, and Leechburg occurred precisely as Pierce, Lewis, Edwards, and four other deponents said they did, the important point here is that the entire Kiskiminetas Valley became symbolic of the Amalgamated's struggle against U.S. Steel. "The dear public in the BLACK VALLEY, is owned BODY AND SOUL by the American Sheet and Tin Plate Company," said the union's paper.[37] Throughout the summer the union continued to attempt to talk to Vandergrift workers, and the Vandergrift burgess, James Chambers, anticipating problems on Labor Day, signed into law a proclamation that said, in part:

> After congratulating the people of Vandergrift and the adjoining boroughs on the measure of peace and prosperity which now pervades the community, I know that I voice the sentiment of all good people in saying that we would deplore anything that would mar the peace and harmony which now pervades the entire community, and this is particularly so as regards Vandergrift Borough. It is, therefore, a matter of regret that outside influences seem to be at work, the accomplishment of which would only tend to disturb the peace and order of the Borough of Vandergrift. I refer to the marches, parades, meetings and demonstrations by persons mostly non-residents, and which could have no other effect than to engender ill-feeling among our citizens and neighbors. . . .
>
> Now, know ye, That I, James H. Chambers, Burgess of the Borough of Vandergrift, Pennsylvania, by and under the authority and power in me vested by law, do hereby (until such time as may seem more expedient) forbid the assembling of such persons in large crowds upon the streets, alleys, highways or private properties, and all marches, parades, public meetings, or any other public demonstrations within the borough limits, and all persons are commanded to follow their usual avocations in their usual quiet way.[38]

As the rank-and-file membership of the Amalgamated began to learn of Chambers's form of martial law, letters poured into the *Amalgamated Journal* de-

nouncing the town of Vandergrift. One self-proclaimed socialist from Martin's Ferry, Ohio, who frequently submitted articles to the *Journal* under the name of O. Bowen (Hugo), called the Vandergrift superintendent and his workers "Oscar Pilate Lindquist and his Jewish mob." This correspondent declared:

> [Vandergrift] is an open shop (non-union) hellhole and the free(?), independent(?) wage slaves there can say "The 'Trust' is my shepherd, I shall not want any good thing during the time when a strike is on at the union mills. He maketh me lie down in the green pastures of non-unionism; he leadeth me from mill to mill to break the strike. He prepareth a table for me inside the bullpen; he even fileth [*sic*] my cup with booze. He hireth 'thugs of hell' to defend me." . . . Brother Llewllyn [*sic*] Lewis and his aide will hardly agree that Vandergrift is a "paradise"—seems more like the other place.[39]

But others firmly stood by their belief that Vandergrift was not a hellhole, and throughout the fourteen-month strike that the Amalgamated waged against U.S. Steel, the Vandergrift workforce remained loyal. After 1910 and until McMurtry's death in 1915, articles continued to appear about Vandergrift, each contributing to the town's "paradise" image. Most writers stressed how atypical the place was when compared with other industrial towns. In company towns where the manufacturer was in control of the local agenda, there was no local politics; in industrial towns "run by politicians, merchants, and the professional class, the man with the dinner pail [is] practically excluded from office." Hence Vandergrift, because residents like mill superintendent Lindquist, a borough councilman, had been able to become involved, represented the "ideal" situation.[40]

A 1912 article by E. M. Thierry, "A Wonderful Town of Prosperous Toilers," found that self-government and home ownership had made Vandergrift unique both socially and physically. Because Vandergrift residents had taken responsibility, Thierry said, there was no crime: the "utmost of good fellowship prevails." Foreigners, "even though they are in the minority . . . comprise . . . an exceptional class. Many have become American citizens and scores are owners of homes." Garrett W. Dawson, a roller, told Thierry that "there couldn't be any agitation in the mill, 'because there is nothing to agitate about.'" Self-government and self-ownership had also contributed to the "unusually beautiful" appearance of the town: "The houses are not built in blocks or after one prevailing style, but are as individual as the tastes of their owners, so that the place looks more like a thriving Western town built by well-to-do people in varied walks of life, than like a community made up of the employees of one large man-

ufacturing concern."[41] The *Craftsman* even went as far as to say that the "peace of the town has never been disturbed by a strike."

In 1916, *American Magazine* journalist Ida Tarbell offered her assessment of Vandergrift. Tarbell had built a career exposing the bleak impacts of industrialization on American life, and Vandergrift council members and the editor of the *Vandergrift Citizen*, expressed concern immediately after her visit about what she would write and how fair it would be:

> While we are not informed as to the exact object of Miss Tarbell's visits here we understand that she now has in course of preparation a series of articles treating on the Sheet Steel combination and is now busy looking into the economic conditions of the town's [*sic*] influenced thereby.
>
> She spent several days in our little city looking into conditions here during which time she had the support and assistance of the local authorities not only of the local plants but of the town as well and we hope that her report of the Sheet Steel will be at least more favorable than [were parts of her report on] Standard Oil.

Tarbell's book *New Ideals in Business* (based on her *American Magazine* articles) turned out to be an examination of the positive changes that were starting to take place in capital's attitude toward labor. She wrote:

> It would be difficult in the United States to-day to find a prettier town, greener, trimmer, cleaner, and more influential than this town of Vandergrift, owned outright by men who daily carry a dinner pail. It is owned by mill men and governed by mill men. Organised as a borough with a burgess and a council, the majority of the town government are labourers in the mill. In fact, except for an occasional shop-keeper, the men who work with their hands at the hardest of hard labour, making sheets of iron and plates of steel fill all the elective positions of trust and authority. . . . They make the society.

Even within the rise of big business, Tarbell was pleased to find that Vandergrift workers had considerable control over their own destinies.[42]

However, Tarbell also looked at the dark side of Vandergrift. She discovered that low wages for laborers and high prices for lots had relegated more than a thousand people to the less-desirable conditions of East Vandergrift. Given the nature of the steel industry and the paternalistic attitudes of the "town fathers," there was a "domestic service line" that kept women in the home or in lower-

paid clerical and service occupations. Within the community, there was dissatisfaction and debate:

> I found the town council two years ago divided on the purchase of a motor fire truck. The school board was jealously discussing the Gary schools, and if they could or ought to imitate them. The librarian and her counsellors were debating over the relative number of works of fiction and non-fiction to buy with a small income. The women were sitting in judgment on the town fathers, criticising their street-cleaning, their slow development of playgrounds, their toleration of pool-rooms.[43]

While union sympathizers, Progressives, and other muckrakers may have viewed these conditions as evidence of the excesses of capitalism run amok, Tarbell saw these problems as "normal": "Vandergrift is quite as human in all its wants and experiences as if it were not a 'model town,' a thing created, not allowed to spring up." Moreover, she pointed out, by 1916 the town had weathered the rise of U.S. Steel as well as two major labor disputes. Tarbell thus concluded her discussion of Vandergrift by calling it "the most important industrial town in America."[44]

Part of Vandergrift's adjustment to its new role within the U.S. Steel corporate system was dependent upon the modification of the town image. The original positive image that McMurtry created in the mid-1890s had been muddied by immigration and speculation in the private property market. Moreover, McMurtry's image of Vandergrift had been reinterpreted by labor sympathizers, the steel industry, and social-reform-minded journalists. Although one reinterpretation was extremely critical of Vandergrift and U.S. Steel, it did not seem to have much affect on outsiders' impressions of the town: the majority of articles written about Vandergrift stressed its positive features. Nor did organized labor's negative interpretation have much influence on the way residents ran their lives. In spite of the union pressure in 1909, the mill continued to produce steel with its nonunion workforce for the duration of the fourteen-month strike.

Thus worker loyalty was stronger and longer-lasting than any other aspect of the McMurtry/Olmsted plan except the curvilinear streets. Given the town's ability to adjust to the emergence of corporate capitalism, to withstand the criticism of organized labor, and to serve as a model for other industrial communities, when Tarbell's *New Ideals in Business* appeared in 1916, Vandergrift could be considered by U.S. Steel and nonunion workers nothing but a resounding success. Vandergrift was capital's utopia: the steelmaking town housed a militantly loyal, self-sustaining workforce.

The Meaning of Vandergrift for Industrial Restructuring

McMurtry and Apollo Iron and Steel built Vandergrift during the mid-1890s in response to two things: the first was local: a set of circumstances peculiar to the Kiskiminetas Valley and southwestern Pennsylvania; the second was general to much of northeastern North America and parts of Western Europe: massive industrial restructuring changes. The company's inability to capitalize efficiently and profitably on a particular distribution of manufacturing sites, labor, transportation routes, and natural and human resources at the town of Apollo forced them to consider relocating. As the shift from iron to steel sparked the restructuring of business enterprise, production technologies, and the workforces of dozens of U.S. steel producers, so, too, changed the steel industry's "corporate culture"—the prevailing set of business practices, management strategies, and attitudes toward technology and labor held by many firms.[45] If Apollo Iron and Steel were to survive and be as successful as it could be during this phase of adaptation and crisis, it had to change its own internal corporate culture, mainly by phasing out the "craftsman's empire" dominated by puddlers, rollers, and the tendency toward unionism. William Rogers had fostered that craftsman culture at Apollo and Leechburg in the 1860s and 1870s when he introduced tinplate production from Britain (and a workforce predisposed toward unionism). McMurtry, with J. J. Vandergrift's Standard Oil money to back him up, set out to unravel it in the 1880s and 1890s. The craftsman's empire, appropriate during the era of iron production, the firm believed to be inappropriate for steel.

As McMurtry made Apollo Iron and Steel into a large and profitable steel producer, he negotiated his way through the layered complexities of the emerging corporate steel industry, managed crises like the Apollo lockout and strike, observed what other industrialists (like Carnegie and Frick, Pullman, the Schneiders, and Krupp) were doing to achieve similar goals, paid attention to broader public sentiments regarding how he was supposed to treat workers, and ascended nearly to the top of one of the largest business enterprises in the United States. And along the way, McMurtry and his company created the town of Vandergrift.

In 1901, when the Vandergrift plan was put to the test during the massive labor dispute involving U.S. Steel, dozens of workers testified to McMurtry's (and their) success. They had in practice created a situation that geographer David Harvey would later explain in theory. By encouraging Vandergrift workers to become Vandergrift petty proprietors through home ownership, McMurtry

aligned the goals of labor with those of capital. Thus he inserted capital's power into Vandergrift's landscape via the inertial properties of home ownership. If there is anything villainous in what McMurtry did, this is it: home-owning workers had little interest in striking or organizing so long as they held property or a mortgage on it and their everyday activity space was so localized; nor would they strike or organize until transportation improvements opened up back-up employment possibilities farther afield and the unions experienced a resurgence across western Pennsylvania during the great depression of the 1930s.[46]

Thus the scions of U.S. Steel, many of Vandergrift's residents, and Ida Tarbell were convinced by the 1910s that their town had resolved the debates about capital's relationship with labor. They saw Vandergrift as a model for how capital and labor should interact and, in turn, U.S. Steel copied aspects of the town when they built Gary, Indiana. Furthermore, curvilinear streets, comprehensive infrastructure planning and service provision, and owner occupation of single-family detached houses—all Vandergrift hallmarks—eventually became fundamental to American suburban design. Within ten years after the town's creation, several similar towns and suburban real-estate ventures in other parts of the United States incorporated the principles of social order through environmental determinism, home ownership, and self-help. Even within southwestern Pennsylvania, new real-estate developments near the steel mills at Hyde Park, Avonmore, New Kensington, and Ambridge physically resembled Vandergrift.

Apart from the case of Gary, however, there is no specific mention of Vandergrift as the prototype for these later settlements.[47] The attitudes and ideals with which McMurtry had experimented on a community scale so quickly became part and parcel to the broader economic, social, political, and cultural currents that other industrialists and real-estate developers drew upon that they probably had little idea who the pioneers had been. Vandergrift nevertheless remains one of the earliest and most successful U.S. industrial towns where a manufacturer explicitly used environmental determinism, home ownership, and self-help to ensure company profitability during industrial restructuring.[48] To win his workers' loyalty, McMurtry tried to ensure that at least some of them achieved in Vandergrift a middle-class lifestyle on working-class wages by making loans available on easy terms—something that the federal government, lending agencies, and suburban developers tried to achieve for demobilized GIs and their families after World War II.

Vandergrift was not for everyone, however. Not all of McMurtry's workers could afford to live there. The Olmsted plan and infrastructure had made lots

too expensive for many semiskilled and unskilled workers and their families. Even skilled workers in the Olmsted plan sometimes had to pursue extreme strategies to have a Vandergrift address. Some sacrificed the ideal of the nuclear family that had been espoused in *Vandergrift Ready* by taking in boarders who would help them pay off their mortgages or meet rental payments. Teenage children in Vandergrift went out to work in higher percentages than in Vandergrift Heights and East Vandergrift. Some families even sacrificed the advantages of having a single house on a lot by building income-generating alley housing at the back. In short, it cost a lot to live in Vandergrift. But that was a circumstance that Apollo Iron and Steel workers chose. No one forced them to move there.

Those workers who could not afford Vandergrift could pursue other options: Vandergrift Heights and East Vandergrift. Although the other sites did not offer the same social and physical infrastructure as those in Vandergrift, lesser-paid workers and their families still went ahead and saved enough to build or purchase homes in these adjacent settlements. As they did, in both East Vandergrift and Vandergrift Heights residents developed a strong and vibrant sense of place.

Sense of place and the fact that 51 percent of the household heads who resided on the entire Vandergrift peninsula in 1910 were homeowners helped to ensure that Vandergrift, Vandergrift Heights, and even East Vandergrift became long-term fixtures on the landscape. And therein lies the great tragic irony of a company-built industrial settlement where home ownership and civic mindedness were so important at the outset. During the late-twentieth century, there occurred another turbulent round of industrial restructuring within the steel industry. Striving to maintain its competitiveness in a global economy where production had shifted to the western side of the Pacific Rim, U.S. Steel abandoned or sold many of its older steelworks in the northeastern United States, including Vandergrift. Similar to Apollo residents in the 1900s when U.S. Steel abandoned them, many Vandergrift residents in the 1980s remained economically and emotionally committed to their hometown and would not leave. From the beginning, their employers, bankers, newspaper editors, relatives, and neighbors (and later on, their government) instilled within them the importance of home ownership and pride of place. Their major employer, however, was gone.

How would the people of this community be able to remain in Vandergrift and continue to support themselves? Similar to their historical Apollo neighbors who formed their own steel company and set out to attract other industry to rejuvenate their town during the 1910s, Vandergrift residents of the 1980s and 1990s had to explore strategies that would maintain their town's economic and

social viability. But instead of looking for heavy industry that might relocate to Vandergrift, they looked inward and backward—to their town's history. In the process they resurrected the town's "workingman's paradise" image. This image and the landscape of Victorian houses attached to it, has since started to attract new residents, investors, and tourists to the town.

Epilogue

Around lunchtime on May 17, 1990, the officers of the Vandergrift Museum and Historical Society and the Kiski Area Historical Society stood together, stared up at the gray sky, and wondered if they had picked a bad day for a town celebration. Although the morning's steady rain had stopped, low-lying clouds still threatened to dampen the festivities. A crowd started to assemble in front of the Casino Municipal Building. Teachers from Saint Gertrude's Catholic School positioned their uniformed elementary students in two straight but fidgety rows. Some high school students clowned on the Casino steps for a camcorder. Elderly Vandergrift residents staked their claims in the mass of wooden folding chairs set out in front for the occasion. Other people milled around the VIP dais, periodically glancing between the sky and the newest addition to the town's public landscape: a state historical marker (fig. E.1), whose black canvas cover flapped in the wind.[1]

A little before 12:30 P.M., just as the Kiski Area High School marching band paraded into the street intersection in front of the Casino, bright rays of sun penetrated the clouds. Before a crowd that now numbered more than two hundred, the Vandergrift Borough Council president, Jack E. Jewart, asked the Reverend

VANDERGRIFT
Hailed by historian Ida Tarbell as America's "most important industrial town," with homes owned by the workers. Founded 1895 by Geo. G. McMurtry, president, Apollo Iron & Steel Co. Named for Capt. Jacob J. Vandergrift and designed by the firm of Frederick Law Olmsted.
PENNSYLVANIA HISTORICAL AND MUSEUM COMMISSION 1990
ONE Vandergrift CENTER

Fig. E.1. Vandergrift historical marker. Photo taken looking northwest toward the Vandergrift mill site. The building on the left formerly served as Apollo Iron and Steel and American Sheet Steel's Vandergrift office. (Photo by Anne E. Mosher.)

Claude Moorfield of the First Baptist Church to lead the assembly in prayer, and Moorfield thanked God for Vandergrift, "America's most important industrial town." Speaker followed speaker, the schoolchildren barely able to contain their restlessness. But some of the high school students—members of their school's historical society—looked increasingly serious, having played a major role in ob-

taining the marker for the town. After five speakers, a member of the Kiski Area High School color guard stepped up to the marker and gingerly pulled away the canvas cover. The crowd erupted in a hearty round of applause. Embossed on the blue metal placard were the words:

> Vandergrift
>
> Hailed by historian Ida Tarbell as America's "most important industrial town," with homes owned by the workers. Founded 1895 by Geo. G. McMurtry, president, Apollo Iron & Steel Co. Named for Capt. Jacob J. Vandergrift and designed by the firm of Frederick Law Olmsted.

After Eugene Iagnemma, chair of the Vandergrift Museum and Historical Society, had presented the marker to Mayor James B. Kerr and the community, Kerr told the crowd that he was "glad of the history that this community had." From the beginning, Vandergrift "had a variety of ethnic backgrounds, social backgrounds." The town, he said, figured importantly in the Kiskiminetas Valley, western Pennsylvania, and even the nation, attested to by the number of towns and cities that annually celebrate Vandergrift Day, including Detroit, San Diego, Fort Lauderdale, Phoenix, and Cleveland. Kerr mentioned how important the U.S. Steel Corporation had been to the town, how important the old steel mill's new occupant, Allegheny Ludlum Steel Corporation, would be in the future, and how proud he was to be from Vandergrift: he planned to stay there for the rest of his life.

Probably the most insightful remarks made during the ceremony came from the next speaker. Like the other participants, Richard Vidmar, from the Westmoreland County Commissioner's office in Greensburg, congratulated Vandergrift on its history. He paused, and then said: "But the best is yet to come . . . , Vandergrift is coming back." It took Vidmar, an outsider to the community but someone familiar with the industrial decline that Westmoreland County experienced during the 1980s, to see the forest, not just the trees: the dedication ceremony, he said, highlighted Vandergrift's creation in 1895, but it also celebrated the 1990s rejuvenation of a steel town that many inhabitants had written off as a dying place only five years before.

Vandergrift amid Global-scale Industrial Restructuring

Throughout its existence, Vandergrift's lifeblood had been the steel industry. As a result, the Vandergrift landscape acted as an industrial barometer: when

Fig. E.2. Vandergrift's "company town" landscape. The foreground shows the back elevations of two cookie-cutter rows of houses along Sumner and Farragut Avenues. Steel-company investors, including J. J. Vandergrift Sr., erected them to house merchants, mill clerks, and managers. (Photo by Deryck W. Holdsworth. Used by permission.)

steel prices and orders were high, Vandergrift homeowners gave their houses a fresh coat of paint; late-model automobiles could be found in many garages, and downtown bustled with pedestrians, cars, and business (figs. E.2 through E.7). In the early 1980s, however, restructuring of the steel industry occurred on a global scale, and this landscape and community were threatened. Southwestern Pennsylvania steel companies had started to scale back production, close, and even dismantle their furnaces, mills, and foundries up and down the Monongahela, Allegheny, and Ohio Valleys. Other Pittsburgh satellite mill towns—Homestead, McKeesport, Aliquippa, Ambridge, New Kensington—subsequently suffered high unemployment rates, overburdened social services, crumbling infrastructure, and a great deal of anxiety about the future.[2] Vandergrift residents hoped that their steelworks and town would not suffer the same fate.

In March 1986, when I made my first visit to Vandergrift, things looked bleak for the town. USX (as U.S. Steel came to be known after its merger with Texas

Fig. E.3. Victorian housing in Vandergrift. Not the most ostentatious of houses in the town, these three dwellings are typical of most houses in the Olmsted Plan portion of Vandergrift Borough. Most are two and one-half stories and have large front porches and three to four bedrooms. The buildings take up nearly the entire width of the lots on which they sit. (Photo by Anne E. Mosher.)

Oil and Gas in 1986) had reduced steel production in the mill to a trickle.[3] A succession of empty storefronts marked downtown's Grant Avenue, and houses simply were not selling. The Vandergrift Borough Council and the Kiski Area School Board spent meeting after meeting trying to figure out how best to finance public services with an eroded tax base.[4] A few people with whom I spoke tried to be optimistic about the future, but perhaps they were in a state of denial; the majority expressed a great deal of bitterness toward USX. For the town that once boasted one of the largest and most productive sheet steel mills in the entire U.S. Steel Corporation, the demise of the mill was going to be a hard pill to swallow.

USX permanently closed the Vandergrift mill in June 1988. Almost immediately, rumors circulated through town about a buyer. Given how desperate all of the other towns around Pittsburgh were for new industry, Vandergrift residents feared that the rumors were too good to be true; however, that autumn, Al-

Fig. E.4. Washington and Franklin parklet. Looking south down Franklin Avenue toward Saint Gertrude's Roman Catholic Church. (Photo by Anne E. Mosher.)

Fig. E.5. Vandergrift Heights. Looking northeast toward the Olmsted Plan. (Photo by Deryck W. Holdsworth. Used by permission.)

Fig. E.6. East Vandergrift. The elevated railroad bed serves as a levee. It affords some protection from the Kiskiminetas floodwaters, but not enough during extreme rainfall events. In the Saint Patrick's Day flood of 1938, most dwellings were substantially damaged or destroyed. Nevertheless, East Vandergrift, with its modest two-story houses, now represents a much safer investment for owner-occupiers than it did in the 1900s and 1910s. (Photo by Anne E. Mosher.)

legheny-Ludlum announced that it would refurbish the plant: it would install a computerized mini-mill to roll special sheet steel orders. The town was saved—or so most people thought. But when the mill reopened, it had little local effect: nearly all of the highly skilled workers employed by Allegheny-Ludlum at Vandergrift commuted from other parts of the Pittsburgh Metropolitan Area, and the people of Vandergrift felt cheated.[5] They could hear the mill operating. They could see the glow of the mill's yard lamps in the night sky. And yet, they could feel the continuing repercussions of "deindustrialization." Former Vandergrift steelworkers now commuted as many as forty miles to work in distant new jobs. Or they left Vandergrift altogether. Others begrudgingly accepted golden handshakes from USX. For a number of years during the late 1980s, Mayor Jim Kerr sometimes was the only person in town who would speak optimistically about Vandergrift's future; most of the community seemed resigned

Fig. E.7. Vandergrift business district. Looking west down Grant Avenue as it curves subtly toward the Casino and the mill. (Photo by Anne E. Mosher.)

to the idea that Vandergrift might, like many southwestern Pennsylvania steel towns, become another played-out place.[6]

Vandergrift's Heritage as an Urban Revitalization Tool

Amid the malaise and despair, a handful of Vandergrift residents worked quietly on a project that they hoped would rekindle some of Vandergrift's community spirit. In 1988, the Vandergrift Borough Council learned that the Casino Municipal Building, now eighty-eight years old, needed a new roof. Inside the two-story, Greek Revival structure, plaster was falling in chunks from the ceiling and walls. When it rained, the floors became a maze of rags and buckets. Rather than spend precious public funds on renovation, the council decided that it would be cheaper to move the borough's public library, police station, mayor's office, and tax office to larger quarters in a public school left empty by school consolidations.

Hearing of this plan, residents wanted to know what would happen to the Casino. Unable to pin the council down on an answer, Kiski Area High School

teacher Eugene Iagnemma and several other Vandergrift citizens predicted demolition—a fate that they believed would amount to a community tragedy: the Casino occupied a conspicuous hilltop site at the end of the street that separated downtown Vandergrift from the steel mill's yard. A key visual element in the Vandergrift landscape, the Casino had for decades been the political and social heart of the town. Besides the municipal offices it housed, during the 1900s and 1910s people from all over the Kiskiminetas Valley flocked to the Casino's six-hundred-seat vaudeville theater to watch performers with national reputations; and during the steel strike of 1901, Vandergrift mill employees gathered there to show support for U.S. Steel. In the decades that followed, several generations of Kiskiminetas Valley residents saw their first motion pictures at the Casino; by the 1970s, however, the theater had fallen victim to competition from multiplexes, several of which opened within a half-hour's drive from Vandergrift. Only the municipal offices and public library remained in the building. Iagnemma and his colleagues decided to launch a campaign to save the Casino, and later this group organized formally as what is known today as the Victorian Vandergrift Museum and Historical Society.

Initially, the society's efforts received lukewarm support in town. Some residents simply did not understand the fuss over a dilapidated building, and most members of the borough council agreed with them: the Casino was an economic liability and councilors were resolute in their decision to move to the empty Adams-Lincoln School. Even among the circle of people who viewed the Casino as a community asset—a circle that grew ever wider—there was at times bitter division about the best strategy to save it. Should the structure and surrounding ground be designated a national historic place to protect it against radical alteration or demolition? Could a buyer for the property be found? Could the borough council be convinced to abandon its office relocation plans? Could the money be raised to purchase and restore the Casino?

The town did in fact become a national historic place in 1995, and with the help of donations and a series of grants-in-aid, during the early 1990s the Casino was restored to its 1900s opulence. But at the time the above questions were first posed, in the late-1980s, they were vexing to the community.[7] No matter what strategy was chosen, the Vandergrift Museum and Historical Society had to convince someone that the Casino was worth saving, be it the Vandergrift Borough Council, the U.S. Department of the Interior, an investment group, or the community at large. While still choosing a strategy, they began to assemble information that would establish the Casino and town's historical significance. They

found and displayed Vandergrift artifacts, including two gold medals from the 1904 St. Louis World's Fair that had been awarded to the Apollo Iron and Steel Company, American Sheet Steel, and the U.S. Steel Corporation for "Housing of the Working Classes" and "Industrial Betterment" at Vandergrift.[8] Given the national resurgence of interest in the career and landscapes of Frederick Law Olmsted Sr. during the 1980s, the group also publicized the links between the town and the "originators of landscape architecture in America."[9] They saw the "Olmsted connection" as conclusive evidence that Vandergrift was historically significant and that the Casino—the building that occupied an important location in the Vandergrift Olmstedian landscape—was worth saving.

The shrewdest move that the pro-Casino group made, however, was encouraging the Kiski Area High School Historical Society to take on the acquisition of the historical marker as their special project. If the young people of Vandergrift cared enough to raise $1,175 to obtain a historical marker that celebrated the entire town's past, then the rest of the community should care enough to do something about a single building. While selling "historical marker" pizza and hoagies to their peers, teachers, and parents, the high school students educated Vandergrift about its history. The historical marker on the Casino's east lawn will continue to educate for years to come.

Interpretations of Vandergrift: Both "Paradise" and "God-forsaken"

The marker unveiled in 1990 does not do the town justice. It is true that the process of obtaining it helped to rekindle Vandergrift's sense of community and history and bolstered the Casino campaign and the effort to achieve national-historic-place status, but the wording that the Pennsylvania Historical and Museum Commission (PHMC) approved for the marker's text focuses on only a small aspect of Vandergrift's historical significance. For a motorist passing through town on Pennsylvania Route 56, the marker might not mean much: Vandergrift is simply a praiseworthy place created by a now defunct steel company and designed by "the people who did Central Park." Moreover, by quoting Ida Tarbell, the marker draws from—and reinforces—a single image of Vandergrift that dates from the town's inception in 1895: that of a democratic, model paradise for the workingman, planned and built by the Apollo Iron and Steel Company but owned and governed by workers. PHMC director Kurt Zwickle's letter of greeting read at the marker dedication neatly captures this image:

> A century ago George McMurtry had a vision. His fast growing Apollo Iron and Steel Company had no room left for further expansion and in 1892 he bought 640 acres bordered by the Kiskiminetas River and the [Western] Pennsylvania Railroad. In this venture he had the financial backing of Captain J. J. Vandergrift. Trying to avoid the problems of surrounding milltowns, McMurtry studied the best industrial communities in both Europe and America and then he selected the famed landscape architect Frederick Law Olmsted to design his new town. A complete infrastructure was first created—streets, utility lines and other improvements—and in 1895 the lots were offered for sale to millworkers themselves. Soon Vandergrift was being hailed by industrial reformers as a model company town. In 1904 its design won two gold medals at the St. Louis Exhibition. The magazine *Iron Age* in 1909 named it a workingman's paradise. The journalist and historian Ida Tarbell called it "the most important industrial town in America."

After quoting Tarbell—"It would be difficult . . . to find a prettier town—greener, trimmer, cleaner and more influential than this town of Vandergrift, owned outright by men who daily carry a dinner pail"—the letter ended: "The town of Vandergrift stands in proud testimony of the vision of its founder."

The same basic message underpins the entirety of a 229-page local history written by a committee of Vandergrift residents to celebrate their town's centennial in 1996. Their effort, entitled *Something Better than the Best—The Story of America's First Successful, Worker-owned Planned Community*, is a meticulously researched and beautifully written labor of love, filled with dozens of photographs and ephemera from the Vandergrift newspapers.[10] Although no notes are included to link specific statements to their exact primary or secondary sources, nearly all of the historical "facts" that the authors have chosen to include square perfectly with information that I found, when working on my 1989 Ph.D. dissertation and subsequent projects, in the land, tax, and council records, the census, the Olmsted correspondence, and Sanborn fire insurance maps. And, while much of Vandergrift's history is recounted and interpreted by the authors in copious detail and with a real richness that only community "insiders" could bring to the task, it appears that they have glossed over or avoided anything that detracts from the positive "workingman's paradise" image. Only four paragraphs are devoted to the 1893–94 labor dispute in Apollo. No mention is made of the fact that Apollo Iron and Steel allowed replacement workers who had rejected unionism (and were of the "right" ethnicity) to purchase Vandergrift Borough and Vandergrift Heights property. Early Vandergrift is simply presented as a

place (albeit a special place designed by the Olmsted firm) that grew in response to a housing demand created by a new mill.[11]

When the book moves into the late 1890s and early 1900s, it says nothing about George McMurtry's later rise within, and activities as a member of, U.S. Steel (including his company's decision to abandon Apollo—even after it promised residents that it would not). Nor does it mention the 1901 strike in which Vandergrift's workers played such an important role, nor the 1909 strike during which the borough believed it necessary to ban public assemblies and to crack down on the use of public space. Had these things been discussed, the authors would probably not have ended their book with such a strongly worded passage focusing on McMurtry's integrity:

> Gazing back through history, it is easy to see how the dreams and ideals of certain men and women are passed down through generations. Dreams and ideals that are founded in integrity and excellence have a way of persevering and growing. Such was the dream and the ideals of George G. McMurtry. Though he claimed his motives were based strictly on profitability, they followed the same ideals of life, liberty, and the pursuit of happiness passed on to this nation by its founding fathers.
>
> One ideal, more than others, the ideal of freedom, perpetuated by McMurtry, left a legacy upon his town that would endure though a century of trials and tests. The opportunity to own one's own house, opportunity to govern one's own town, opportunity to advance by one's own efforts, and freedom of worship were all built into McMurtry's dream. It was from such opportunities and ideals that the character of this community was forged and by which it has continued as "something better than the best." What greater gift can a man leave future generations than quality of character?[12]

The 1990s state-sanctioned and oft-repeated "paradise" image of Vandergrift is boosterism at its best, meant to foster a stronger sense of place, create community identity, and attract tourists and investment. Vandergrift's history, however, presents a variety of images and interpretations, facets of which are alternatively overlapping and mutually supportive, contradictory and mutually antithetical. It is indeed true that McMurtry built Vandergrift when he ran out of room at his existing mill in nearby Apollo, Pennsylvania. But it is equally true that McMurtry created Vandergrift following an 1893 labor dispute with the Amalgamated Association of Iron and Steel Workers. McMurtry wanted not only to escape unionism, but he wanted his firm to do what it could to preclude any union resurgence that might occur in its mills in the future.

As a consequence of McMurtry's attitudes about organized labor, several late-nineteenth and early-twentieth-century writers created another, less-than-boosterish image for the town by calling it "God-forsaken Vandergrift." They reported that McMurtry's nonunion "sheep" not only kept the Vandergrift mill in operation during the national steel strike of 1901, they also saved U.S. Steel from having to negotiate a union agreement for the entire corporate system. According to them, McMurtry had turned his workers into U.S. Steel's hapless pawns, ready to be moved into the corporation's union mills whenever and wherever necessary. For some writers, Vandergrift epitomized capital's hegemony over labor. The historical marker and the 1996 centennial history both ignore this image.

During my research on Vandergrift, I hoped that the primary evidence would allow me to say conclusively whether one of the possible interpretations of George McMurtry and Vandergrift was more correct than the other. Was McMurtry labor's unsung capitalist hero or was he, as John Owens told me, "an SOB" who thwarted unionism and discarded the town of Apollo after it was no longer useful. Equally, I wanted to find clear evidence that either Vandergrift was a mean, hegemonic company town dressed up in Olmsted curvilinear streets and late-Victorian architecture or that it was a truly happy, democratic place such as the workingman's paradise image implied. What I found in the primary record is anything but conclusive. McMurtry and his town had both their positive and negative attributes. The late-1980s and early-1990s local "vernacular memory" reinforces this idea.[13] In spending many hours visiting with residents in the senior-citizen high-rise on Lincoln Avenue during the course of my research, I heard numerous stories (some passed down from the first generation of residents) about secret labor meetings, corrupt burgesses and town constables, romantic, moonlit rendezvous in the abandoned railway cut, excursions through gaps in the whitewashed fence that separated "the hunkies in East Vandergrift" from the rest of town, baseball rivalries, graduation ceremonies, uplifting Sunday sermons, racist priests, profane "mixed" marriages between Italian Catholics from Vandergrift Heights and Vandergrift Borough's American Protestants, Halloween pranks, and mill accidents. I also heard residents talk about how much better their parents and grandparents believed Vandergrift was over Apollo, the Kiskiminetas Valley farms, and the "old country" where they had lived before. To them, Vandergrift clearly was both a workingman's paradise *and* a Godforsaken place.

The resurrection of the positive image, the workingman's paradise, is perhaps

inevitable when a town is trying to hold on in the midst of economic decline. By latching on to this image, Vandergrift residents are not doing anything new (boosterism figured in Apollo's name change from Warren in the mid-nineteenth century). The image was key also to Vandergrift's initial success as a real-estate venture. The danger of promoting a single Vandergrift image, however, is that it creates a climate where it becomes difficult to celebrate, and unpopular to explore, other interpretations of the past that might consider a variety of political viewpoints and minority opinions. And for this reason, I suspect that my industrial-restructuring approach to Vandergrift and my discussion of the Godforsaken Vandergrift image and virulent anti-unionism among the town's early residents will not be popular with some modern-day residents.

Having said that, however, I believe that a focus on Vandergrift's early industrial and labor histories helps bring to empirical life some geographical aspects of industrial-restructuring theory that have been discussed only in the abstract or in late-twentieth-century situations. It highlights Vandergrift's pivotal (but previously overlooked) role in the formation of U.S. Steel's early management and labor-relations agendas. It also provides a slightly different context for understanding one of the first urban designs created by the Olmsted landscape firm without the assistance of Frederick Law Olmsted Sr. At Vandergrift, U.S. industrial capital responded to its managerial, technological, and sociopolitical milieu by drawing upon the nascent design profession to create a town that would be owned by workers and that would embody an agenda of urban social order through environmental determinism and self-help. How many corporations hired the Olmsted firm to execute an entire town plan because they were trying to forge new social relationships with their workforce? It may be that additional research into the professional careers of John C. and Frederick Law Olmsted Jr. will uncover others, but Vandergrift was definitely the first.

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Appendix

Employment Histories of Apollo Rollers and Laborers, 1892–1896

The names of workers who moved to Vandergrift are highlighted in **bold**. The names of workers who remained in Apollo or moved elsewhere are highlighted in *italics*. All other names are of workers who could not be found after the 1896 tax-assessment records in either the Vandergrift property records or 1900 census for Apollo, Vandergrift, Vandergrift Heights, Morning Sun, or surrounding townships. I have not listed the names of workers who could not be identified every year or who never moved up to a better job at the mill.

The Apollo strike and lockout began in summer 1893, after the annual tax assessment. The impacts of the strike on occupational structure are not discernible until 1894.

I have been careful not to take count data of rollers and laborers as definitive measures of the size of the workforce and the magnitude of the strike. There is a great deal of evidence that suggests many problems with the original primary documentation, including surname misspellings, occupational misclassifications, and omissions from the tax roles due to oversight. Therefore the strongest and most plausible interpretation to make from the following list of rollers and laborers concerns the correlation between general employment history patterns and eventual residence in Vandergrift. The employment history patterns found in the tax-assessment records corroborate statements made by labor union and trade papers regarding McMurtry's hiring and management practices during the 1893–94 strike/lockout. The lack of movement of individuals to Vandergrift who, from their employment histories, appear to have been disloyal workers, possibly union members, corroborates local folklore and company statements that these individuals were barred from purchasing property in Vandergrift and Vandergrift Heights.

Sources: Armstrong County Tax Assessment Records, Apollo, Pennsylvania, 1892–1896; U.S. Department of Commerce, Bureau of the Census, *Population Manuscripts*, 1880, 1900, 1910; Westmoreland County Tax Assessment Records, Vandergrift, Pennsylvania.

Rollers

Group A: Rollers who were demoted, never resumed their 1892 jobs, or disappeared by 1896: 18 (these were possibly Amalgamated members disloyal to McMurtry)

Auberle, Albert	Demoted to laborer in 1893; left Apollo in 1894
Bailey, Thomas	Demoted to laborer in 1894; left Apollo in 1895
Artman, John A.	Demoted to laborer in 1893; left Apollo in 1895
Forbes, Thomas A.	Demoted to catcher in 1894; left Apollo in 1896
Hilty, D. L.	Left Apollo in 1894; returned to work as laborer in 1896
Kirkland, Luther	Demoted to laborer in 1894; left Apollo in 1895
McCabe, Henry	Demoted to laborer in 1894; left Apollo in 1895
Wilson, George W.	Became Apollo town burgess in 1894
Stitt, Galbraith	Demoted to laborer in 1894; left Apollo in 1895
Edwards, Steven	Left Apollo in 1895
Molinder, Charles	First appearance as a roller in 1893; demoted to laborer in 1894
McCullough, George H.	Left Apollo in 1894
Haddock, M. E.	Left Apollo in 1894
Fiscus, William	Demoted to laborer in 1894; became heater in 1895; left Apollo in 1896; moved to Hyde Park, Pa., to become a roller (1900); owned house and resided in Hyde Park, 1900
Golden, C. P.	First appearance as roller in 1893; demoted to laborer in 1894; left Apollo in 1895; mortgaged house and worked as a laborer in Apollo in 1900
Davis, Griffith	Demoted to laborer in 1894; moved away in 1895; owned house and resided in Apollo, 1900; worked as a roller in 1900
Lewis, Hubert	Scottish immigrant; demoted to laborer in 1893; rented and resided in Apollo, 1900
Kelly, Charles J.	Demoted to laborer in 1894; left Apollo in 1896; boarded with Charles Ivory in Vandergrift and worked as a rougher in 1900

Group B: 1892 rollers who persisted in the tax-assessment records as rollers through 1896: 3 (these were possibly Amalgamated workers who renounced their union membership in 1893 or who worked for Philip Laufman in 1893 and were not affected by the Apollo Iron and Steel strike/lockout; possibly loyal to McMurtry)

Henry, Harry T.	On inaugural Vandergrift rolling crew; first-day Vandergrift buyer

Owen, James	Owned house and resided in Apollo, 1900
Shaner, Harry T.	Resided with parents in Apollo, 1900

Group C: Workers who may have moved to Apollo as nonunion replacement rollers during the strike and remained as rollers through 1896: 9 (loyal to McMurtry)

George, Clarence M.	First appearance as a roller in 1894; first-day Vandergrift buyer
Riblet, Harry	First appearance as a roller in 1894; first-day Vandergrift buyer
Spiher, Edward S.	First appearance as a roller in 1894; first-day Vandergrift buyer
Young, Alva E.	First appearance as a roller in 1894; first-day Vandergrift buyer
Cochran, Ardesco B.	First appearance as a roller in 1895; first-day Vandergrift buyer
Daugherty, Joseph	First appearance as a roller in 1895; first-day Vandergrift buyer
Kirkwood, Hugh	Promoted from laborer to roller in 1894; owned house and resided in Apollo in 1900
Stitt, Frank E.	First appearance as a roller in 1894
James, L. D.	First appearance as a roller in 1895

Group D: Laborers who were fast-tracked through the mill hierarchy to become rollers before 1897: 5 (loyal to McMurtry)

Jack, James Jr.	Promoted from laborer to roller in 1895; demoted to catcher in 1896, member of inaugural rolling crew
Stitt, Harry M.	Began as laborer in 1894; promoted to heater in 1895; promoted to roller in 1896; purchased Vandergrift lot before 1899
Snyder, Edward	First appearance as a roller in 1894; left Apollo in 1896; first-day Vandergrift buyer
Troup, Uriah	Began as laborer in 1894; promoted to roller in 1895; first-day Vandergrift buyer; owned Vandergrift house in 1900
Coffman, T. R.	Began as laborer in 1895; promoted to roller in 1896

Group E: 1892 rollers who may have been union members before the strike/lockout, were demoted during the strike in 1893, but later resumed as roller: 4 (these were possibly Amalgamated workers who initially struck against McMurtry, but later capitulated; eventually loyal to McMurtry)

Jack, Robert C.	Demoted to laborer in 1894; resumed roller's position in 1895
Rich, William A.	Demoted to laborer in 1894; resumed roller's position in 1895; rented house in Hyde Park in 1900; worked as roller in 1900
Jack, Louis T.	Demoted to laborer in 1894; resumed roller's position in 1895; left Apollo in 1896; owned house in, resided in, and was a roller in Apollo, 1900
Walker, W. B.	Demoted to laborer in 1894; resumed roller's position in 1895; rented house and resided in Apollo, 1900

Group F: Individuals who may have been replacement rollers and were later demoted, or left Apollo: 6 (attitude toward McMurtry unknown)

Carpenter, S. C.	First appearance as a roller in 1894; demoted to heater in 1896
Johnson, John F.	First appearance as a roller in 1894; left Apollo in 1896
Beddows, George W.	First appearance as a roller in 1894; left Apollo in 1896; a merchant in the 1900 Apollo tax-assessment records; was a roller in 1880
Geary, R. F.	First appearance as a roller in 1894; demoted to laborer in 1895; promoted to heater in 1896; owned house and resided in Apollo in 1900
Buzzard, John W.	First appearance as a roller in 1894; left Apollo in 1896; first-day Vandergrift Heights buyer
Hulings, E. Gordon	First appearance as a roller in 1894; left Apollo in 1896; first-day Vandergrift buyer; owned house in Vandergrift in 1900

Group G: 1892 rollers who retired after 1893: 2 (attitude toward McMurtry unknown)

Marshall, James	Demoted to laborer in 1894; retired in 1895; first-day Vandergrift buyer
McNutt, Thomas	Retired in 1895; first-day Vandergrift buyer; owned house, resided in, and worked as roller in Apollo, 1900

Group H: Rollers mentioned in tax-assessment records during a single year and who cannot be classified: 6

Laborers

Group A: Individuals who held laboring positions every year between 1892 and 1896: 10

Ridenour, J. A.	Purchased property in Vandergrift Heights, 1897
Jack, Thomas	Laborer at Hyde Park in 1900; lived in a rented house
Watt, James A.	Laborer at Apollo in 1900; Apollo resident; housing tenure unknown
Whittlinger, John W.	Butcher in Apollo in 1900; owned house in Apollo, 1900
Pool, Grant	Laborer at Apollo in 1900; Apollo resident; housing tenure unknown
Lucas, Daniel	
Duncan, W. H.	
Smail, Daniel	
Jones, Charles	
Turner, Charles	

Group B: Laborers who were promoted to mill occupations in 1893: 10

Crickard, William	Promoted to mill clerk; purchased property in Vandergrift Heights in 1898
Hamilton, A. A.	Promoted to tinner; promoted to gasfitter in 1894; promoted to doubler in 1895; resided in Vandergrift in 1900
Gibson, James Jr.	Promoted to galvanizer; resided in Vandergrift in 1900
Prugh, William L. J.	Promoted to heater; first-day Vandergrift buyer; roller owning a house in Vandergrift in 1900
Kirkland, George	Promoted to heater; day laborer in 1900; rented house in Apollo, 1900
Syran, Michael	Promoted to heater
Kirkland, John H.	Promoted to heater
Baxter, Edwin	Promoted to tinner
Davis, Sam	Promoted to rougher
Whittinger, W. H.	Promoted to heater

Group C: Laborers who were promoted to mill occupations in 1894: 7

Beck, Harry P.	Promoted to heater; first-day Vandergrift buyer; owned house in Vandergrift in 1900
Klingensmith, William	Promoted to heater; purchased property in Vandergrift Heights in 1897
Truby, Henry	Promoted to heater; resided in Apollo in 1900
Bash, Elmer	Promoted to heater; laborer in 1900; rented house in Apollo, 1900
Snider, George	Promoted to moulder; moulder in 1900; rented house in Apollo, 1900

Talmage, Thomas	Promoted to mill mason
Morrison, Robert	Promoted to galvanizer

Group D: Laborers who were promoted to mill occupations in 1895: 17

Hannah, W. J.	Promoted to shearman; left Apollo in 1896; resided in Vandergrift in 1900
Beck, Emmet	Promoted to rougher; purchased Vandergrift property in 1898; resided in Vandergrift, 1900
Stitt, James S.	Promoted to engineer; promoted to heater in 1896; first-day Vandergrift buyer; owned house in Vandergrift in 1900
Olinger, David J.	Promoted to heater; first-day Vandergrift buyer
Lellas, Lincoln	Promoted to heater; first-day buyer in Vandergrift Heights; resided in Vandergrift Heights in 1900
Lellas, Harry	Promoted to heater; first-day buyer in Vandergrift Heights; resided in Vandergrift Heights in 1900
Moore, Ollie	Promoted to catcher; resided in Vandergrift Heights in 1900
Lellas, Stewart	Promoted to catcher; promoted to doubler in 1896; rougher in 1900; mortgaged house in Vandergrift Heights, 1900
Knox, Thomas C.	Promoted to heater; left Apollo in 1896; resided in Apollo in 1900
Parks, T. J.	Promoted to heater; resided in Apollo in 1900
Klingensmith, Ed	Promoted to heater; heater in Apollo, 1900; rented house in Apollo, 1900
Brown, Thomas	Promoted to catcher; foundryman in 1900; rented house in Apollo, 1900
Housholder, S. D.	Promoted to rougher
Kowalsky, John	Promoted to mill machinist
Zillers, Wes	Promoted to heater
Rudolf, B. F.	Promoted to rougher
Truby, C. W.	Promoted to heater

Group E: Laborers who were promoted to mill occupations in 1896: 8

Borland, Leslie	Promoted to heater; first-day Vandergrift Heights buyer; resided in Vandergrift Heights in 1900
Johnston, Robert G.	Promoted to rougher; purchased Vandergrift property in 1897; resided in Vandergrift in 1900
Lookhart, Harvey P.	Promoted to heater; catcher in 1900; rented house in Vandergrift Heights

Fairman, Harry	Promoted to heater; heater in 1900; lived Kiskiminetas Township in mortgaged house, 1900
Detter, Frank	Promoted to heater
Hadley, Thomas	Promoted to shearsman
Townsend, C. W.	Promoted to shearsman
Fiscus, L. T.	Promoted to rougher

Group F: Laborers for whom a date of promotion to a mill job cannot be ascertained due to missing data for one or more years in the tax-assessment records: 10

Group G: Laborers who were promoted, but not to a mill job: 39

Group H: Laborers with single-year records who cannot be classified: 176

Group I: Laborers who were included in multiple years of the tax-assessment records but who had intermittent gaps in their employment histories and cannot be classified: 128

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Notes

Preface

1. Histories that deal with (and celebrate) the modernist planning agenda include Lewis Mumford's *The City in History: Its Origins and Transformations, and Its Prospects* (New York: Harcourt, Brace & World, 1961), Mel Scott's *American City Planning since 1890: A History Commemorating the Fiftieth Anniversary of the American Institute of Planners* (Berkeley: University of California Press, 1969), Peter Hall, *Cities of Tomorrow: An Intellectual History of Urban Planning and Design in the Twentieth Century*, updated ed. (London: Blackwell, 1996). Critiques of modernist urban and regional planning can be found in M. Christine Boyer, *Dreaming the Rational City: The Myth of American City Planning* (Cambridge: MIT Press, 1983), and Leonie Sandercock, *Making the Invisible Visible: A Multicultural Planning History* (Berkeley: University of California Press, 1998).

2. For general biographical discussions on these three individuals, see Laura Wade Roper, *FLO: A Biography of Frederick Law Olmsted* (Baltimore, Md.: Johns Hopkins University Press, 1973); Cynthia R. Field, "The City Planning of Daniel Hudson Burnham" (Ph.D. diss., Columbia University, 1974); and Robert Caro, *The Power Broker: Robert Moses and the Fall of New York* (New York: Random House, 1975).

3. My perspective on the relationship between power and urban design has been influenced greatly by Denis Cosgrove's *Social Formation and Symbolic Landscape* (Totowa, N.J.: Barnes & Noble, 1984). For abbreviated discussions of this book's intellectual impact upon Anglophone cultural and historical geography, see Peter Jackson, *Maps of Meaning* (London: Routledge, 1989), 43–45, and Robin Butlin, *Historical Geography: Through the Gates of Space and Time* (London: Edward Arnold, 1993), 136–46.

4. J. N. Boucher, *Old and New Westmoreland* (New York: American Historical Society, 1915), 3:565.

5. Later I would learn that Vandergrift was not a company town in the usual sense of that term. According to company-town historian John Garner's typology of industrial settlements, Vandergrift was, for the most part, conceptualized and built as a "model industrial town." Company towns are generally places where a single business enterprise maintains complete ownership over modes of production, housing, community facilities, and public space. In an industrial town, capital relinquishes some aspects of ownership and control. What makes a town "model" is the extent to which its creators build according to a premeditated social agenda and forego maximum economic profit at the outset: John S. Garner, *The Model Company Town: Urban Design through Private Enterprise in Nineteenth-Century New England* (Amherst: University of Massachusetts Press, 1984), 5–6.

6. Author's field research notes, Mar. 7, 1986.

7. For example, see Andrew Hill Clark, *Acadia: The Geography of Early Nova Scotia to 1760* (Madison: University of Wisconsin Press, 1968); Donald W. Meinig, *Southwest: Three Peoples in Geographical Change, 1600–1970* (New York: Oxford University Press, 1971); and Hildegard Binder Johnson, *Order upon the Land: The U.S. Rectangular Land Survey and the Upper Mississippi Country* (New York: Oxford University Press, 1976).

8. J. W. Harrington and Barney Warf, *Industrial Location: Principles, Practice and Policy* (London: Routledge, 1995), 129.

Introduction

1. See Jon C. Teaford, *The Rough Road to Renaissance: Urban Revitalization in America, 1940–1985* (Baltimore, Md.: Johns Hopkins University Press, 1990).

2. For example, many nineteenth-century Pennsylvania real-estate developers platted housing tracts according to a rectilinear grid plan. Within the grid, alleys often bisected the interior of city blocks. Originally intended as access routes that would keep delivery vehicles and night-soil collection off polite front streets, alleys became places where property owners built additional houses at the back of their front-street lots, especially in towns and cities where additional residential space was at a premium. In the process, they transformed service alleys into narrower versions of the front streets—something that the original surveyors presumably never intended: see Anne E. Mosher and Deryck W. Holdsworth, "The Meaning of Alley Housing in Industrial Communities: Examples from Late-Nineteenth and Early-Twentieth Century Pennsylvania," *Journal of Historical Geography* 18 (1992): 174–89.

3. See Don Mitchell, "The End of Public Space? People's Park, Definitions of the Public, and Democracy," *Annals of the Association of American Geographers* (hereafter, *AAAG*) 85 (1995): 108–33.

4. Since the late 1960s, the literatures of urban historians and geographers have made the "public versus private" debate over land use a major theme; e.g., see Sam Bass Warner Jr., *The Private City: Philadelphia in Three Periods of Its Growth* (Philadelphia: University of Pennsylvania Press, 1968), and Kevin R. Cox, *Conflict, Power, and Politics in the City: A Geographic View* (New York: McGraw-Hill, 1973). In the 1990s, two factors led to interest in this theme taking on a new tone: a number of geographers, historians, urban designers, and sociologists reformulated their understanding of the debate in light of (1) the post—World War II proliferation, and popularity, of privately owned places with significant spaces that are marketed for public use (such as shopping malls and theme parks); and (2) academic disenchantment with assimilationist models of citizenship that privileged Anglo-Saxon, property-owing males as the main actors in the public sphere. This recent work has raised important questions about conventional definitional understandings of *public* and *private;* e.g., see Don Mitchell, *Cultural Geography: A Critical Introduction* (Oxford: Blackwell, 2000), 209–11; John M. Findlay, *Magic Lands: Western Cityscapes and American Culture after 1940* (Berkeley: University of California Press, 1992); Michael Sorkin, ed., *Variations on a Theme Park: The New American City and the End of Public Space* (Berkeley: University of California Press, 1993). Given the intention of Apollo Iron and Steel (Apollo I&S) to create a space where their private interests would be met while a set of public interests emerged, and given my perspective on this process, *Capital's Utopia* is closely related to the recent public-space literature.

5. Carville V. Earle, "Comment on Meinig's Prospectus for Geographers and Histo-

rians," *American Historical Review* 83 (1978): 1206–9; Carville Earle, *Geographical Inquiry and American Historical Problems* (Stanford, Calif.: Stanford University Press, 1992). For discussions regarding the context in which Earle's ideas were initially proposed, see Michael P. Conzen, "The Historical Impulse in Geographical Writing about the United States, 1850–1990," in Michael P. Conzen, Thomas A. Rumney, and Graeme Wynn, eds., *A Scholar's Guide to Geographical Writing on the American and Canadian Past* (Chicago: University of Chicago Press, 1993), 3–90; and J. Nicholas Entrikin, "Blurred Boundaries: Humanism and Social Science in Historical Geography," *Historical Geography* 26 (1998): 93–99.

6. The works that have been most important to informing my conceptual understanding of industrial restructuring include Harry Braverman, *Labor and Monopoly Capital: The Degradation of Work in the Twentieth Century* (New York: Monthly Review Press, 1974); Doreen Massey, *Spatial Divisions of Labor: Social Structures and the Geography of Production* (New York: Methuen, 1984); Doreen Massey and Richard Meegan, *The Anatomy of Job Loss: The How, Why, and Where of Employment Decline* (London: Methuen, 1982); Alan Warde, "Industrial Restructuring, Local Politics, and the Reproduction of Labour Power: Some Theoretical Considerations," *Environment and Planning D: Society and Space* 6 (1988): 75–95; John Bradbury, "The Social and Economic Imperatives of Restructuring: A Geographical Perspective," in Audrey Kobayashi and Suzanne Mackenzie, eds., *Remaking Human Geography* (Boston: Unwin Hyman, 1989), 21–39; Peter Dicken and Nigel Thrift, "The Organization of Production and the Production of Organization: Why Business Enterprises Matter in the Study of Geographical Industrialization," *Transactions of the Institute of British Geographers*, n.s. 17 (1992): 281; and especially Michael Storper and Richard Walker, *The Capitalist Imperative: Territory, Technology, and Industrial Growth* (New York: Basil Blackwell, 1989).

7. For general historical discussions of the late-nineteenth and early-twentieth-century U.S. iron and steel industries, see James M. Swank, *History of the Manufacture of Iron in All Ages* (New York: Burt Franklin, 1892); Peter Temin, *Iron and Steel in Nineteenth-Century America: An Economic Inquiry* (Cambridge: MIT Press, 1964); Gertrude G. Schroeder, *The Growth of Major Steel Companies, 1900–1950* (Baltimore, Md.: Johns Hopkins Press, 1953); and William T. Hogan, *Economic History of the Iron and Steel Industry in the United States*, 4 vols. (Lexington: D. C. Heath, 1971). For geographical and more local treatments, see Kenneth Warren, *The American Steel Industry, 1850–1970: A Geographical Interpretation* (Oxford, Eng.: Clarendon Press, 1973), and Arthur C. Bining, *Pennsylvania's Iron and Steel Industry* (Gettysburg: Pennsylvania Historical Association, 1954).

8. For historical overviews of the role of labor within the rise of big business, see Jeffrey Haydu, *Between Craft and Class: Skilled Workers and Factory Politics in the United States and Britain, 1890–1922* (Berkeley: University of California Press, 1988), and David Montgomery, *The Fall of the House of Labor: The Workplace, the State, and American Labor Activism, 1865–1925* (Cambridge: Cambridge University Press, 1987). Studies that deal specifically with labor in the steel industry are David Brody, *Steelworkers in America: The Non-Union Era* (Cambridge: Cambridge University Press, 1960), and Gerald G. Eggert, *Steelmasters and Labor Reform* (Pittsburgh, Pa.: University of Pittsburgh Press, 1981). Two works that look specifically at labor relations in Pittsburgh and southwestern Pennsylvania are Francis G. Couvares, *The Remaking of Pittsburgh: Class and Culture in an Industrializing City, 1877–1919* (Albany: State University of New York Press, 1984), and Carl I.

Meyerhuber Jr., *Less Than Forever: The Rise and Decline of Union Solidarity in Western Pennsylvania, 1914–1948* (Cranbury, N.J.: Associated University Presses, 1987). Peter Shergold, *Working-Class Life: The "American Standard" in Comparative Perspective, 1899–1913* (Pittsburgh, Pa.: University of Pittsburgh Press, 1982) puts these relations into international perspective.

9. Historian John Ingham makes the point that not all steelmaking firms assumed large, hierarchically organized corporate forms. Nor did they all become subsidiaries of larger umbrella corporations. At any point in time, many different organizational structures were found in firms that operated in the Pennsylvania steel industry: John Ingham, *Making Iron and Steel: Independent Mills in Pittsburgh, 1820–1920* (Columbus: Ohio State University Press, 1991). To understand the emergence of the corporate form, I have made use of several general studies, including Leslie Hannah, *The Rise of the Corporate Economy*, 2nd ed. (London: Methuen, 1976); Glenn A. Porter and Harold C. Livesay, *Merchants and Manufacturers: Studies in the Changing Structure of Nineteenth-Century Marketing* (Baltimore, Md.: Johns Hopkins Press, 1971); Glenn A. Porter, *The Rise of Big Business* (Arlington Heights, Ill.: Harlan Davidson, 1973); Alfred D. Chandler, *The Visible Hand: The Managerial Revolution in American Business* (Cambridge, Mass.: Belknap Press, 1977); Martin J. Sklar, *The Corporate Reconstruction of American Capitalism, 1890–1916* (Cambridge: Cambridge University Press, 1988). None of these works were written by geographers, however. They only hint at the geographical dimensions of the rise of big business.

10. Geographer John Bradbury's model of industrial-restructuring trigger events, their geographical antecedents and outcomes, is particularly useful to understanding industrial restructuring from a spatial perspective. Bradbury, "Social and Economic Imperatives of Restructuring." For a discussion of Bradbury's model as it relates to Vandergrift, see my "'Something Better than the Best': Industrial Restructuring, George McMurtry and the Creation of the Model Industrial Town of Vandergrift, Pennsylvania, 1883–1901," *AAAG* 85 (1995): 84–107.

ONE: Experimentation in the Kiskiminetas Valley Iron Industry

1. The Kiskiminetas Valley nevertheless contributed to Pittsburgh's success as one of the preeminent trading and manufacturing centers of the trans-Appalachian West. Historians have carefully analyzed Pittsburgh's relationship with most of its southwestern Pennsylvania hinterland. Historical geographer Edward K. Muller's work has been particularly important in pointing out that interpretations of Pittsburgh as an industrial city need to look beyond iron and steel to the myriad additional resource-extraction and manufacturing activities that occurred in Pittsburgh's hinterland. These activities included salt refining and chemical processing, coal extraction and coke manufacturing, oil production and refining, glassmaking, food processing, and metal fabrication; see Edward K. Muller, "Historical Aspects of Regional Structural Change in the Pittsburgh Region," in Joachim Hesse, ed., *Regional Structural Change and Industrial Policy in International Perspective: United States, Great Britain, France, and the Federal Republic of Germany* (Baden-Baden: Nomos-Verlag, 1988), 17–48; "Metropolis and Region: A Framework for Enquiry into Western Pennsylvania," in Samuel P. Hays, ed., *City at the Point: Essays on the Social History of Pittsburgh* (Pittsburgh, Pa.: University of Pittsburgh Press, 1989), 181–211; and most recently "Industrial Suburbs and the Growth of Metropolitan Pittsburgh, 1870–

1920," *Journal of Historical Geography* 27 (2001): 58–73. For other general works that include discussion of early southwestern Pennsylvania, see John W. Florin, *The Advance of Frontier Settlement in Pennsylvania, 1638–1850: A Geographical Interpretation* (University Park: Pennsylvania State University, Department of Geography paper no. 14, 1977); David J. Cuff, William J. Young, Edward K. Muller, Wilbur Zelinsky, and Ronald F. Abler, *The Atlas of Pennsylvania* (Philadelphia, Pa.: Temple University Press, 1989); and R. Eugene Harper, *The Transformation of Western Pennsylvania, 1770–1800* (Pittsburgh, Pa.: University of Pittsburgh Press, 1991). Popular accounts include S. T. Wiley, *Biographical and Historical Cyclopedia of Indiana and Armstrong Counties, Pennsylvania* (Philadelphia, Pa.: J. M. Greshem, 1891) and J. H. Beers, *Armstrong County, Pennsylvania, Her People Past and Present* (Chicago: J. H. Beers, 1914).

2. The Conemaugh River is perhaps best known as the waterway on which the Johnstown flood occurred in 1889. The flood killed more than 2,200 people: David G. McCullough, *The Johnstown Flood* (New York: Simon & Schuster, 1968).

3. Within southwestern Pennsylvania, the Kiskiminetas watershed—known colloquially as the Kiskiminetas Valley—remains virtually unstudied. Historian Carl Meyerhuber's study of twentieth-century unionism in the "Alle-Kiski Valley" and Danny Mitchell's dissertation on the salt industry in the same region are two notable and excellent exceptions, but their historical and thematic coverage is limited: Meyerhuber, *Less Than Forever;* Danny M. Mitchell, "The History and Significance of the Salt Industry in Pennsylvania" (Ph.D. diss., Pennsylvania State University, 1963). Indeed, primary records exist for the valley, but in-depth historical and historical geographic analyses of these sources do not. For this chapter, therefore, I have marshaled some of the readily available primary evidence as well as a few of the existing secondary sources to present a brief overview of the Kiskiminetas Valley's historical geographic development prior to 1865. My purpose is to set the regional stage on which the steel industry grew later in the century. The writing of a detailed historical geography of antebellum life in the Kiskiminetas Valley—a la James T. Lemon's *The Best Poor Man's Country: A Geographical-Study of Early Southeastern Pennsylvania* (New York: W. W. Norton, 1972)—has yet to be accomplished.

4. Richard C. Wade, *The Urban Frontier: Pioneer Life in Early Pittsburgh, Cincinnati, Lexington, Louisville, and St. Louis* (Chicago, Ill.: University of Chicago Press, 1959).

5. Kiskiminetas Valley resident William Watson had the town of Warren surveyed in November 1816. The plat consisted of five streets that ran parallel to the river. Four alleys bisected these streets, creating twenty square blocks. Each block was divided into four 66 by 165 feet lots. On the last street, known as Back Street, Watson made room for a public lot on which a meetinghouse and schoolhouse would be erected: Armstrong County deed register, vol. 6, 147; Thomas J. Henry, *1816–1916 History of Apollo, Pennsylvania: The Year of a Hundred Years* (Apollo, Pa.: News-Record Publishing, 1916), n.p.

6. National Park Service, U.S. Department of the Interior, *The Evolution of Transportation in Western Pennsylvania* (Denver, Colo.: U.S. Department of the Interior, National Park Service, Denver Service Center, 1994).

7. Baltimore already possessed an advantage in the Northwest Territories after the National Road reached the Ohio River at Wheeling by 1818; construction started in Cumberland, Maryland, in 1808. The Erie Canal—New York City's tentacle across upstate New York—had just been officially dedicated in October 1825: Karl Raitz, *The Na-*

tional Road (Baltimore, Md.: Johns Hopkins University Press, 1996); Ronald E. Shaw, *Erie Water West: A History of the Erie Canal, 1772–1854* (Lexington: University of Kentucky Press, 1966).

8. James McFarlane, "The Pennsylvania Canals," *Western Pennsylvania Historical Magazine* 2 (1919): 38–51; Donald J. Ballas, "The Western Division of the Pennsylvania Canal: An Historical Geography," *Pennsylvania Geographer* 24 (1986): 27–34; David L. Fritz and Berle Clemensen, *Pennsylvania Main Line Canal, Juniata and Western Divisions: Special Study* (Denver, Colo.: U.S. Department of the Interior, National Park Service, 1993). For a description of travel on the Pennsylvania Canal, see Charles Dickens, *American Notes and Pictures from Italy* (reprint, London: Oxford University Press, 1957).

9. W. K. Cadman, "Kier's 5-Barrel Still—'A Venerable Relic,'" *Western Pennsylvania Historical Magazine* 42 (1959): 351–62

10. By the 1880 U.S. federal manuscript census, only eight Kiskiminetas Valley residents were identifiably associated with the salt industry—three as salt boilers, two as saltworks workers, and three as salt manufacturers—a far cry from 1835, when between a thousand and fifteen hundred were recorded: U.S. Bureau of the Census, *Tenth Census, 1880: Population Manuscripts*, Pennsylvania, Armstrong County (Arm. Co.), Westmoreland County (West. Co.); Mitchell, "History and Significance of the Salt Industry," 60, 75; S. T. Wiley, *Biographical and Historical Cyclopedia*, 622–23.

11. Writers' Program, Work Projects Administration, Pennsylvania, *Pennsylvania: A Guide to the Keystone State* (New York: Oxford University Press, 1940), 459.

12. Wilbur Zelinsky discusses the nineteenth-century practice of borrowing classical names for U.S. towns in "Classical Town Names in the United States: The Historical Geography of an American Idea," *Geographical Review* 57 (1967): 463–95. Two of the best overall treatments of American booster practices are Carl Abbott's *Boosters and Businessmen: Popular Economic Thought and Urban Growth in the Antebellum Middle West* (Westport, Conn.: Greenwood Press, 1981), and in Daniel Boorstin, *The Americans: The National Experience* (New York: Random House, 1965), the section entitled "The Upstarts: Boosters," 113–68.

13. At the same time, another town called Warren existed in the northern tier of Pennsylvania counties. The post office had already been known as Apollo Station for several years to avoid confusion with the other settlement.

14. W. K. Schusler, "The Railroad Comes to Pittsburgh," *Western Pennsylvania Historical Magazine* 43 (1960): 251–66; "Conemaugh Division: Notes Taken from History of P.R.R. in Valuation Engineer's Office, Philadelphia," typescript, n.d. (c. 1897), Pennsylvania Rail Road papers, Historical Collections and Labor Archives, Pattee Library, Pennsylvania State University, University Park, Pennsylvania.

15. Robert Walter Smith, *History of Armstrong County, Pennsylvania* (Chicago, Ill.: Waterman, Watkins, 1883).

16. Henry, *1816–1916,* 55.

17. Arm. Co. deed register, vol. 21, 293; ibid., vol. 24, 327.

18. Henry states that Rock Furnace, near Warren, was the first such stack built west of the Alleghenies: Henry, *1816–1916*.

19. Joseph E. Walker, *Hopewell Village: A Social and Economic History of an Iron-making Community* (Philadelphia: University of Pennsylvania Press, 1966), 12; Temin, *Iron and Steel*, 83.

20. Using the terminology of neoclassical economics and Weberian industrial loca-

tion theory, the nineteenth-century Pennsylvania iron industry serves as an excellent example of a "weight-losing" industry: Alfred Weber, *Theory of the Location of Industries* (1909; trans. 1929 by C. J. Friedrich; New York: Atheneum, 1971). Converse to the case of "weight-gaining" industries that tend to locate closer to the marketplace, weight-losing industries gravitate toward the location of natural resources. For a good introductory discussion regarding these basic economic geographic concepts, see J. W. Harrington and Barney Warf, *Industrial Location*, 18–39.

21. Walker, *Hopewell Village*, 121; Robert J. Sims and Harry B. Weiss, *Charcoal Burning in New Jersey from Early Times to the Present* (Trenton: New Jersey Agricultural Society, 1955), 11.

22. The liveliest and most interesting account of the puddling process is James J. Davis's autobiography *The Iron Puddler: My Life in the Rolling Mills and What Came of It* (Indianapolis, Ind.: Bobbs-Merrill, 1922). Davis, who became U.S. secretary of labor in the Warren Harding administration, was born in Tredegar, Wales, in 1873. He emigrated with his mother and siblings to the United States in 1881. Davis's father was employed as a roller in Hubbard, Ohio, and the mother and children joined him there. Later they moved to Sharon, Pennsylvania, where the younger Davis learned to puddle iron. His account discusses the technical aspects of puddling, the culture of work surrounding the puddling process, and the home life of Welsh ironworkers during the late-nineteenth century. Much of my discussion of the puddling process is based on Davis's autobiographical sketch.

23. During the 1860s, many firms improved upon the two-high mill by installing three-high mills. Invented by John Fritz, of Johnstown's Cambria Iron Company, in 1857, a third roll that moved opposite to the bottom roll was mounted on top of the original two-high mill. The middle roll rotated in either direction, working with either the top or bottom roll. After the first pass, the metal was lifted and pushed back through the top set of rolls in the opposite direction. Two-high reversing mills were developed in the 1860s. Although reversing engines were cumbersome and inefficient, reversing mills were installed in many works and were a vast improvement over the conventional, nonreversing mill.

24. For maps of the geographical distribution of iron furnaces, forges, and rolling mills in the northeastern United States, see Warren, *American Steel Industry*, 16, 17, 28. For a map of their location in Pittsburgh, see p. 34 of that volume.

25. This biographical sketch of William Rogers's life is based on several sources—mainly, an obituary that appeared in the *Leechburg Advance* and the *Amalgamated Journal*, the 1870 U.S. federal manuscript census for Apollo, Thomas Henry's history of Apollo, and Cronemeyer's two-part history of the American tinplate industry; see "William Rogers," *Leechburg Advance*, Oct. 11, 1901, reprinted in the *Amalgamated Journal*, Oct. 17, 1901; Henry, *1816–1916;* and W. C. Cronemeyer, "The Development of the Tin-plate Industry: Memoirs of W. C. Cronemeyer," *Western Pennsylvania Historical Magazine* 13 (1930): 23–54, 123–35.

26. Henry, *1816–1916*.

27. Arm. Co. deed register, vol. 32, 238.

28. For a comprehensive and comprehendible discussion of the product-life-cycle idea, see Edward J. Malecki, "Technological Imperatives and Modern Corporate Strategy," in Allen J. Scott and Michael Storper, eds., *Production, Work, Territory: The Geographical Anatomy of Industrial Capitalism* (Boston, Mass.: Allen & Unwin, 1986), 67–79.

29. See Cronemeyer, "Development of Tin-plate Industry," and John Harry Jones, *The Tinplate Industry, with Special Reference to Its Relations with the Iron and Steel Industries* (London, P. S. King & Son, 1914).

30. See Jones, *Tinplate Industry*, 66, and Brody, *Steelworkers in America*, 13.

31. Hogan, *Economic History*, 1:168.

32. Malecki, "Technological Imperatives," 68.

33. "William Rogers," *Leechburg Advance*, and Henry, *1816–1916*.

34. Rogers purchased the well "for a nominal sum and a fine suit of clothes presented to each director of the gas company . . . thus the first gas ever used for metallurgical purposes was used in the mill of Rogers & Burchfield." Smith, *History of Armstrong County*, 139.

35. Smith, *History of Armstrong County*, 148; Jones, *Tinplate Industry*.

36. Arm. Co. deed register, vol. 48, 376, 404, 631. According to the article of copartnership that was filed at the Armstrong County Courthouse, Rogers, Laufman & McElroy had been formed as a partnership two weeks before Rogers & Burchfield declared bankruptcy. Laufman and McElroy were each to buy $24,000 in capital stock; Rogers would contribute his patents for tinplate making and the industrial use of natural gas. Rogers would act as general manager of the Apollo mill, while Laufman was to "attend to the financial department of the business and . . . have the sole right to use the firm name in negotiable paper of any kind." Sarah Laufman promised that her husband Samuel would "lend his services" (what that meant is unclear): Arm. Co. deed register, vol. 53, 223.

37. Beers, *Armstrong County*, 138.

38. Wiley, *Biographical and Historical Cyclopedia*, 389, 395. Geographer Anne Kelly Knowles discusses similar patterns of nineteen-century Welsh labor migration in *Calvinists Incorporated: Welsh Immigrants on Ohio's Industrial Frontier* (Chicago, Ill.: University of Chicago Press, 1997).

39. Rogers died in Wheeling, West Virginia, on Oct. 7, 1901. He was buried Oct. 10, 1901, in the Leechburg cemetery: *National Encyclopaedia of American Biography* (New York: James T. White, 1901), 11:445; s.v., "William Rogers"; and Wiley, *Biographical and Historical Cyclopedia*, 411.

40. Under J. C. Kirkpatrick's ownership, the Leechburg mill became a producer of iron sheets that at first rivaled Laufman & McElroy's Apollo mill. In 1880, four years after Rogers & Burchfield failed, both Laufman & McElroy and Kirkpatrick's mills had nine puddling furnaces. Both companies produced pan, elbow, lock, shovel, and showcard iron, but Kirkpatrick had further specializations in stamping, tea tray, and spoon iron and continued to manufacture tinplate. Apollo may have done the same, but it did not advertise it in the 1880 American Iron and Steel Association's annual directory. Both mills did, however, have similar occupational structures at the semiskilled and skilled levels. For example, the Apollo mill employed nine rollers; the Leechburg mill employed eight; thirteen puddlers worked at Apollo, seventeen at Leechburg; eight skilled hammermen were employed in each mill. By 1894, the Apollo mill had two 20-gross-ton open-hearth steel furnaces, whereas at Leechburg Kirkpatrick had added only one 15-gross-ton furnace. Apart from Kirkpatrick's choice to lock out unionized workers shortly after McMurtry locked out union workers at Apollo in 1893 (and hence both workforces lent each other financial assistance and moral support), the Leechburg mill's existence apparently did not make much difference to Apollo during the late-nineteenth century. For this reason, the re-

mainder of this chapter focuses specifically on Philip Laufman and his tenure in the Apollo mill: American Iron and Steel Association, *Directory to the Iron and Steel Works of the United States* (Philadelphia Pa.: American Iron and Steel Association, 1880).

41. In 1840, at age eighteen, Laufman moved from Chambersburg to Pittsburgh. He married, had several children, and became the proprietor of two hardware firms: Huber & Laufman and Laufman & Brother. During the 1860s Laufman held several public offices in Pittsburgh, including seats on the select council and the board of education. Wiley, *Biographical and Historical Cyclopedia*, 411. Laufman can thus be classified as a member of the mercantile class that Olivier Zunz argues was so important in the emergence of corporate capitalism: Zunz, *Making America Corporate: 1870–1920* (Chicago, Ill.: University of Chicago Press, 1992).

42. Although the 1880 Apollo census enumerator did not give the exact locations where laborers worked, at least sixty residents from Apollo and adjacent townships made iron and another fifty may have helped them as laborers: Arm. Co. deed register, vol. 61, 59; Ingham, *Making Iron and Steel*, 50.

43. The following discussion about the world in which most iron puddlers and rollers existed draws heavily from David Montgomery, *The Fall of the House of Labor*, 16–22.

44. In Apollo, the oldest puddler or roller in 1880 was roller Henry Absalom, aged fifty-three. The average age was thirty-eight.

45. Beach Nichols, *Atlas of Armstrong County, Pennsylvania* (Philadelphia, Pa.: Pomeroy, Whitman, 1879). For a brief review of the history of county atlases in western Pennsylvania, see Edward K. Muller, "A County Revisited," foreword to G[riffith] M[organ] Hopkins, *Atlas of the County of Allegheny* (N.p.: G. M. Hopkins, 1876; reprint, Pittsburgh: Historical Society of Western Pennsylvania, 1988), i–iii.

46. Montgomery, *Fall of the House of Labor*, 64.

47. The Apollo laborer estimate was derived from the U.S. federal manuscript census in the following way: First, local historian Thomas Henry reported that during the Apollo mill's heyday under William Rogers it employed about 140 workers. Although many of those workers left Apollo after the Panic of 1873, given the modest expansion program undertaken by Laufman between 1876 and 1880, the mill's overall workforce may have increased to about 160. In the 1880 manuscript census for Apollo and adjacent Kiskiminetas, Parks, Bell, and Washington Townships, 88 individuals were positively identifiable as holding nonlaboring occupations in a rolling mill, which (based on a workforce of 160) would leave 72 (or 45%) as laborers.

48. In Apollo, 4% of the population boarded with families, thus modifying the nuclear-family constellation. This figure varied by ethnic group, however. For the Welsh and English in Apollo, approximately 7% were boarders. According to James J. Davis, Welsh immigrants considered it socially responsible to take in the newest arrivals from Wales as boarders:

> Our little four-room company house in Sharon had its doors open to the wayfarer. There was always some newcomer from Wales, looking for a stake in America, who had left his family in Wales. Usually he was a distant kinsman, but whether a blood relation or not, we regarded all Welshmen as belonging to our clan. Our house was small, but we crowded into the corners and made room for another. His food and bed were free as long as he stayed. We helped him find a job, and then he thanked us for our hospitality and went out of our house with our blessings upon him. This

form of community life was the social law in all the cottages of the Welsh. It was like the law of tobacco among Americans.

From a structural "housing perspective," boarding reflected pressures within the local housing market created by a mismatch of the supply of shelter suitable for single men and the labor demands of the mill. The practice was not limited to the towns: in the countryside, a few rural farm families took in boarders, who included hired farmhands and laborers working in coal mines, salt works, the railroad, and even the urban iron mills: Davis, *Iron Puddler*, 73.

49. Beers, *Armstrong County*, 358, 460; West. Co. deed register, vol. 268, 40.

TWO: Apollo's Uneasy Transition from Iron to Steel

1. Wiley, *Biographical and Historical Cyclopedia*, 388.

2. Arm. Co. deed register, vol. 61, 68.

3. U.S. Bureau of the Census, *Tenth Census 1880: Population Manuscripts*, Pennsylvania, Allegheny County.

4. The following biographical sketch and discussion of Standard Oil is compiled from the *Encyclopaedia of Contemporary Biography of Pennsylvania* (New York: Atlantic, 1889), 1:206–11; Matthew Josephson, *The Robber Barons: The Great American Capitalists, 1861–1901* (New York: Harcourt, Brace, 1934); Ida M. Tarbell, *The History of the Standard Oil Company* (New York: Macmillan, 1925); and Ralph W. Hidy and Muriel E. Hidy, *History of Standard Oil Company, New Jersey:* vol. 1, *Pioneering in Big Business, 1882–1911* (New York: Harper & Row, 1955).

5. Mary Louise Briscoe, introduction to Thomas Mellon, ed., *Thomas Mellon and His Times* (Pittsburgh, Pa.: University of Pittsburgh Press, 1994), xxi. Although the National Road was in place from the Ohio River at Wheeling to the port city of Baltimore, much river traffic still plied to the East Coast via the Ohio and Mississippi Rivers, the Gulf of Mexico, and around the Florida Peninsula. Water traffic to the West Coast had to go around the Strait of Magellan. A transcontinental railroad was still twenty years away.

6. *Encyclopaedia of Contemporary Biography*, 208.

7. At the time, this refinery (known as the Imperial Refinery) was one of the largest in the United States.

8. While Vandergrift pioneered solutions to oil's transportation problems and integrated several aspects of production in the oil region, Rockefeller was making an impressive ascent from grocer and small-time moneylender to master of the entire complex of Cleveland oil refineries. Through strong-arm business tactics, he pressured Cleveland's refiners to unite their assets with his. Or he put them out of business. Rockefeller's critics accused him of being a bloodthirsty profit seeker, but he maintained that he was only trying to stabilize prices that had been made volatile by overproduction in the oil fields. In fact, throughout his career Rockefeller argued that everything he did was for the good of the *entire* oil industry. If an "association" of refiners (aka Rockefeller's Standard Oil Company) could control refining, he told competitors, then it could control producers and even the railroad companies that served the oil fields, refineries, and major markets—the Erie, the PRR, and the New York Central. But Rockefeller recognized that for this scheme to work, Standard Oil needed control over *all* refineries—not simply those in Cleveland. Rockefeller had to bring the oil region refiners into his fold. He began ap-

proaching oil region refiners and urged them to turn over their assets to him for appraisal. After making an assessment of their worth, Rockefeller offered them cash or the opportunity to hold Standard Oil stock. He pressed them to accept his terms or face the risk of being put out of business.

9. Rockefeller obviously trusted Vandergrift's technical knowledge of the oil business. Even after investments in other industries diverted Vandergrift's attention away from Standard (he stepped down from a directorship in 1881), Vandergrift maintained the presidency of United Pipe Lines—a Standard Oil subsidiary—for as long as that entity existed.

10. J. J. Vandergrift Sr.'s 1889 biographical sketch in the *Encyclopaedia of Contemporary Biography of Pennsylvania* portrayed him as an honest, generous, and religiously devout man, but the grandiloquent language of the description made even the normal tone of the volume, which always was hyperbolic, seem modest. The sketch reads as though Vandergrift was overcompensating for his involvement in Standard Oil. It included a lengthy quote from an official investigative report that said no business wrongdoing had ever been found on the part of Union Pipe Line. Standard Oil was mentioned only once, giving the impression that it had been included almost as an afterthought.

11. Did the Vandergrifts force out Laufman and McElroy? Was this a hostile takeover? Perhaps. Under Volta Iron's original configuration, the Vandergrift family owned 1,467 shares; Laufman and McElroy's interest, when pooled, amounted to 1,050 shares. If this configuration persisted into 1886, it is conceivable that the Vandergrifts held the majority vote needed to approve the sale of the Apollo mill to Apollo I&S. Some of the primary evidence suggests, however, that Laufman, looking to start a new firm, may have left voluntarily. Back in 1876, Laufman and William Rogers had purchased a small tract of land across the Kiskiminetas River from Apollo. That tract became part of Volta Iron's holdings in 1883. In November 1885, however, Laufman purchased the tract for $1 from Kirk Q. Bingham, another Vandergrift relative. In 1886, Laufman built a new works on this ground—the Apollo Sheet Iron Works of P. H. Laufman & Co., where Laufman developed a new method of electroplating metal for the Pittsburgh electrical-appliance industry. With a small workforce of highly skilled, unionized rollers (who presumably followed him from the old mill), Laufman's management style apparently contrasted markedly with what was developing at Apollo I&S. Poems and letters to the American Federation of Labor's *National Labor Tribune* frequently extolled the virtues of working for Laufman in the Paulton mill, especially during Apollo I&S's labor problems in 1893: Arm. Co. deed register, vol. 64, 390; vol. 65, 65; *The National Cyclopaedia of American Biography* (New York: James T. White, 1918), 11:445; and see, e.g., *National Labor Tribune*, Mar. 9, 1893.

12. See Robert A. Walker, "Death of George G. McMurtry," *Iron Age*, Aug. 12, 1915, 366–67; "George G. McMurtry Dies," *New York Times*, Aug. 7, 1915, 7; "George G. M'Murtry Dies at Sea Resort," *Pittsburgh Press*, Aug. 6, 1915, 1; "McMurtry Memorial Held Sunday," *Vandergrift Citizen*, Oct. 22, 1915, n.p.

13. U.S. Bureau of the Census, *Tenth Census, 1880: Population Manuscripts*, Pennsylvania, Allegheny County, Allegheny City.

14. After assembling all of the information that I could find about McMurtry, I was struck by how much his biographical sketch resembles the story line of a Horatio Alger novel. McMurtry's may truly have been a classic Great American Success Story, but could it be that that is exactly what he and his supporters wanted the public to believe? By cast-

ing his image as one who, having experienced great hardship, rose above it, McMurtry could serve as a role model for industrial labor: work hard, be loyal to those who helped along the way, and with a bit of luck you, too, may become a corporate executive.

15. However, Alden McMurtry—McMurtry's youngest son—worked as a mechanical engineer at the Vandergrift mill in 1900 and lived in an apartment in one of the commercial buildings that an Apollo I&S shareholder owned: U.S. Bureau of the Census, *Twelfth Census, 1900: Population Manuscripts*, Pennsylvania, West. Co., Vandergrift Borough.

16. For one of the clearest overviews of the development of the steel-production process, see Temin, *Iron and Steel*, 13–29.

17. For a list of the thirteen original U.S. Bessemer firms, see Swank, *History of Manufacture of Iron;* see also American Iron and Steel Association, *Directory* (1880). The production percentages are from Montgomery, *Fall of the House of Labor*, 27.

18. American Iron and Steel Association, *Directory* (1894).

19. The rolling-mill description is from C. H. Morgan, "Some Landmarks in the History of the Rolling Mill," *Transactions of the American Society of Mechanical Engineers* 22 (1901): 31–64, quoted by Brody, *Steelworkers in America*, 12.

20. For a discussion of the shifts that took place in the ethnic division of labor in and around Pittsburgh, see Couvares, *Remaking of Pittsburgh*, and Matthew S. Magda, *Monessen: Industrial Boomtown and Steel Community, 1898–1980* (Harrisburg, Pa.: Pennsylvania Historical and Museum Commission, 1985). An excellent theoretical discussion of Marx's concept of the "reserve army of labor" is in Braverman, *Labor and Monopoly Capital*, 386–401. Yda Schreuder looks at the spatial aspects of the ethnic division of labor in two articles, "Labor Segmentation, Ethnic Division of Labor, and Residential Segregation in American Cities in the Early Twentieth Century," *Professional Geographer* 41 (1989): 131–43, and "The Impact of Labor Segmentation on the Ethnic Division of Labor and the Immigrant Residential Community: Polish Leather Workers in Wilmington, Delaware, in the Early-Twentieth Century," *Journal of Historical Geography* 16 (1990): 402–24.

21. My interpretation of labor issues in the steel industry is based on four sources: Montgomery, *Fall of the House of Labor*, chapter 1; Brody, *Steelworkers in America;* Ingham, *Making Iron and Steel;* and the opening chapters of Paul Krause, *The Battle for Homestead, 1880–1892: Politics, Culture, and Steel* (Pittsburgh, Pa.: University of Pittsburgh Press, 1992).

22. Discussion of Homestead has been something of an academic and journalistic cottage industry; see Krause, *Battle for Homestead;* Arthur G. Burgoyne, *The Homestead Strike of 1892*, with an afterword by David P. Demarest Jr. (1893; reprint, Pittsburgh: University of Pittsburgh Press, 1979); William Serrin, *Homestead: The Glory and Tragedy of an American Steel Town* (New York: Vintage Books, 1993); John P. Hoerr, *And the Wolf Finally Came: The Decline of the American Steel Industry* (Pittsburgh, Pa.: University of Pittsburgh Press, 1988).

23. Montgomery, *Fall of the House of Labor*, 41.

24. *Bulletin of the American Iron and Steel Association* 27, no. 35 (1893): 277.

25. The largest producer of course was the Carnegie Steel Co. (annual capacity, 500,000 gross tons): American Iron and Steel Association, *Directory* (1894).

26. Fred Kniffen, "Folk Housing, Key to Diffusion," *AAAG* 55 (1965): 549–77.

27. Between 1886 and 1894, the number of manufacturing and resource-processing

establishments in Apollo increased from six to seven. The number of services more than doubled, from eleven to twenty-seven. Three new financial institutions brought the town's total to four. The number of wholesale and retail establishments increased from forty-five in 1886 to ninety-five in 1894: Sanborn Map Co., *Sanborn Fire Insurance Maps: Apollo, Pennsylvania* (New York: Sanborn Map, 1886, 1889, 1894).

28. Thomas Bell, *Out of This Furnace* (Boston, Mass.: Little, Brown, 1941; reprint, Pittsburgh: University of Pittsburgh Press, 1976), 122–23.

29. Ray Burkett, one of Vandergrift and Apollo's historians, writes that "some accounts sympathetic to the company [Apollo I&S] assert that the land adjacent to the mill had been purchased by speculators, but that McMurtry refused to negotiate with them and proceeded with plans for the new mill." Following through on this argument, McMurtry was supposedly forced to move by the major Apollo landowners: Ray Burkett, "Vandergrift: A Model Worker's Community" (seminar paper, University of Pittsburgh, 1972), 16.

30. The company would make a fivefold profit on its original investment in this property when it began to sell the bulk of it for residential and commercial purposes in 1896: West. Co. deed register, vol. 200, 596; vol. 201, 529; vol. 207, 481; vol. 213, 241; vol. 215, 141, 455; vol. 219, 123; vol. 225, 170.

31. John C. Owens et al., *First Seventy-five Years: A History of Vandergrift* (Vandergrift, Pa.: News-Citizen, 1972), n.p.; *National Cyclopaedia*, 16: 357–58.

32. Historian David Montgomery argues that tensions had long existed between rollers and puddlers within the union, mainly over the issue of a shorter work day. Rollers and other workers wanted the shorter day, puddlers did not. The union leadership may have been unwilling to exacerbate the tension by protesting the puddlers' termination; if they did, they stood to alienate the rollers, who were fast becoming the Amalgamated's lifeblood. Without union intervention, puddlers were assuredly a doomed breed: Montgomery, *Fall of the House of Labor*, chap. 1.

33. Hope Lodge, number 17, was the Apollo and Iron Steel lodge; William Weihe Lodge, number 64, was the Laufman mill's lodge. *National Labor Tribune*, May 4, 1893; *Bulletin of the American Iron and Steel Association* 28, no. 26 (1894): 205.

34. My account of the Apollo and Leechburg lockouts is based on three sources: Burkett, "Vandergrift"; *National Labor Tribune;* and *Iron Age.*

35. *National Labor Tribune*, June 8, 1893, Oct. 12, 1893; *Bulletin of the American Iron and Steel Association* 27, no. 3 (1893): n.p.; *Iron Age*, Oct. 12, 1893, 668. For a discussion of the Sheet Iron Association, see Cronemeyer, "Development of Tin-plate Industry," 123–35.

36. In the absence of union lodge records, I made use of Armstrong County tax-assessment records to corroborate some of these reported occupational changes in regard to laborer promotions and the number of rollers present in Apollo between 1891 and 1895 (see appendix).

37. Arm. Co. tax-assessment records, Apollo Borough, 1892–1896; *National Labor Tribune*, Jan. 26, 1893.

38. Meyerhuber, *Less Than Forever.*

39. See *National Labor Tribune*, Nov. 2, 1893, Nov. 30, 1893, Dec. 7, 1893, Dec. 14, 1893, Dec. 21, 1893, Jan. 4, 1894, and Jan. 11, 1894; *Iron Age*, Nov. 1893.

40. *National Labor Tribune*, Mar. 22, 1894.

41. Ibid., Jan. 11, 1894, Mar. 22, 1894, Sept. 20, 1894.

THREE: The McMurtry, Olmsted, and Eliot Plan for Vandergrift

1. *National Labor Tribune*, March 22, 1894.

2. Discussions of the formation of McMurtry's version of environmentalist thought can be found in *Iron Age*, June 17, 1897, 4–11 (two articles: "The New Works of the Apollo Iron and Steel Company," and "Vandergrift"); "Vandergrift: A Workingman's Paradise," *Iron Age*, Nov. 21, 1901, 6–9; Eugene Buffington, "Making Cities for Workmen," *Harper's Weekly* 53 (May 8, 1909): 15–17; and Ida M. Tarbell, "The Golden Rule in Business, IX: Good Homes Make Good Workmen," *American Magazine* 80 (July 1915): 39–43. General academic discussions of environmentalism as a social philosophy that had implications for the appearance of urban (and industrial) landscapes, include Walter L. Creese, *The Search for Environment: The Garden City: Before and After* (New Haven, Conn.: Yale University Press, 1966); Thomas Bender, *Toward an Urban Vision: Ideas and Institutions in Nineteenth-Century America* (Lexington: University of Kentucky Press, 1975); Garner, *Model Company Town;* Jack Reynolds, *The Great Paternalist: Titus Salt and the Growth of Nineteenth Century Bradford* (London: Maurice Temple Smith, 1983); J. N. Tarn, *Five Per Cent Philanthropy: An Account of Housing in Urban Areas between 1840 and 1910* (London: Cambridge University Press, 1973); and David Ward, *Poverty, Ethnicity, and the American City, 1840–1925: Changing Conceptions of the Slum and the Ghetto* (Cambridge: Cambridge University Press, 1989).

3. Stanley Buder, *Pullman: An Experiment in Industrial Order and Community Planning, 1880–1930* (New York: Oxford University Press, 1967); James Burkhart Gilbert, *Perfect Cities, Chicago's Utopias of 1893* (Chicago, Ill.: University of Chicago Press, 1991); Carl Smith, *Urban Disorder and the Shape of Belief: The Great Chicago Fire, The Haymarket Bomb and the Model Town of Pullman* (Chicago, Ill.: University of Chicago Press, 1995); R. T. Ely, "Pullman: A Social Study," *Harper's Monthly* 70 (1885): 452–66.

4. Buder, *Pullman*, 252; C. H. Eaton, "Pullman and Paternalism," *American Journal of Politics* 5 (1894): 571–79.

5. Nicholas Bullock and James Read, *The Movement for Housing Reform in Germany and France, 1840–1914* (New York: Cambridge University Press, 1985); M. Edel, E. Sclar, and D. Luria, *Shaky Palaces: Homeownership and Social Mobility in Boston's Suburbanization* (New York: Columbia University Press, 1984).

6. "Vandergrift," *Iron Age*, June 17, 1897, 10.

7. Apollo I&S, letter to Frederick Law Olmsted Sr., Apr. 25, 1895, Olmsted Associates Papers (hereafter, OAP), job file, box 204.

8. For discussions of Olmsted's role in this group, see David Schuyler, *The New Urban Landscape: The Redefinition of City Form in Nineteenth-Century America* (Baltimore, Md.: Johns Hopkins University Press, 1986); Cynthia R. Field, "The City Planning of Daniel Hudson Burnham"; Bender, *Toward an Urban Vision;* Kenneth T. Jackson, *Crabgrass Frontier: The Suburbanization of the United States* (New York: Oxford University Press, 1985); and Jon A. Peterson, "The Origins of the Comprehensive City Planning Ideal in the United States, 1840–1911" (Ph.D. diss., Harvard University, 1967).

9. For more on Olmsted's attitudes toward the connections between the recreative aspects of urban parks, labor's health, and the nation's wealth, see Peterson, "Origins of the Comprehensive City Planning Ideal."

10. Eliot had worked for Olmsted before but had several years of independent experience in landscape design, having left Olmsted's employ in 1885 to work on several New

England parks. He rejoined the firm, renamed Olmsted, Olmsted & Eliot, in 1893 to take on a large part of the work associated with the World's Columbian Exposition. John Charles, however, worked closely with his stepfather throughout the 1880s and early 1890s, his main responsibility being the day-to-day management of the firm's many drafters, typists, clerks, and apprentices.

11. Olmsted Sr. was staying at the Biltmore estate in North Carolina when Apollo I&S initiated the Vandergrift project. For more on Olmsted's life, see Laura Wade Roper, *FLO*, and Elizabeth Stevenson, *Park Maker: A Life of Frederick Law Olmsted* (New York: Macmillan, 1977).

12. Olmsted, Olmsted & Eliot (hereafter, OOE), letter to Wallace P. Bache, Apr. 27, 1895, OAP, letterbook A40.

13. OOE, work notes, May 2, 1895, OAP, daybook E4.

14. Ibid.

15. Apollo I&S, *Vandergrift Ready: Vandergrift Lots for Sale on the Ground* (Pittsburgh, Pa.: Apollo I&S, 1896), 6–7.

16. Ibid., 25. For a thorough discussion of nineteenth-century prejudice toward immigrants, see Jay P. Dolan, *The American Catholic Experience: A History from Colonial Times to the Present* (Notre Dame, Ind.: University of Notre Dame Press, 1992).

17. OOE, work notes, May 2, 1895, OAP, daybook E4; John C. Olmsted, work notes, June 27, 1895, OAP, daybook E5.

18. OOE, work notes, May 2, 1895, OAP, daybook E4; "Vandergrift," *Iron Age*, June 17, 1897, 10.

19. Apollo I&S, *Vandergrift Ready*, 13–14.

20. Frederick Law Olmsted Sr., letter to Frederick Law Olmsted Jr., July 23, 1895, Laura W. Roper files, quoted by Roper, *FLO*, 469.

21. OOE, letter to Wallace P. Bache, June 2? [illegible], 1895, OAP, letterbook A41; John C. Olmsted, work notes, Aug. 28, 1895, OAP, daybook E5.

22. That McMurtry proposed that Vandergrift might become the county seat reflects the magnitude of his plans for the town. Given Vandergrift's location on the northeastern border of the county (as well as the central location of the established Westmoreland County seat, Greensburg), McMurtry's idea regarding the county seat was a little unrealistic: OOE, letter to James I. Buchanan, Mar. 22, 1897, OAP, letterbook A51.

23. OOE, letter to George G. McMurtry, Sept. 21, 1895, OAP, letterbook A42.

24. Ibid.; Frederick Law Olmsted and John C. Olmsted, letter to George G. McMurtry, Apr. 12, 1897, OAP, letterbook A51.

25. John W. Reps, *The Making of Urban America: A History of City Planning in the United States* (Princeton, N.J.: Princeton University Press, 1965), 424, 427.

26. Owens et al., *First Seventy-Five Years*.

27. Apollo I&S, letter (dictated by Veryl Preston) to OOE, Sept. 10, 1895, OAP, job file, box 204.

28. When this letter was written, John Olmsted was apparently running the Olmsted firm alone. Eliot died in March 1897 from meningitis. Frederick Law Olmsted Jr. joined the firm later that spring: OOE, letter to James I. Buchanan, Mar. 22, 1897, OAP, letterbook A51.

29. OOE, letter to James I. Buchanan, Mar. 22, 1897, OAP, letterbook A51; Vandergrift Borough (hereafter VB) council minutes, vol. 1, June 3, 1905 and July 1, 1907.

30. OOE, letter to George G. McMurtry, Aug. 9, 1895, OAP, letterbook A41; OOE,

letter to Apollo I&S, Aug. 6, 1895, OAP, letterbook A41. To meet the mill's increasing space requirements in the open-hearth department, the Village Green was cut in half. In 1912, Vandergrift Borough vacated part of the Green to the American Sheet and Tin Plate Co. and rerouted lower Lincoln Avenue: VB council minutes, vol. 2, Aug. 17, 1912, Aug. 21, 1912, and Aug. 24, 1912.

31. John C. Olmsted, work notes, June 27, 1895, OAP, daybook E5; John C. Olmsted, work notes, May 14, 1896, OAP, job file, box 204.

32. Apollo I&S, *Vandergrift Ready*, 26–27; John C. Olmsted, work notes, Apr. 13–14, 1896, OAP, job file, box 204; OOE, letter to Wallace P. Bache, June 9, 1896, OAP, letterbook A46.

33. West. Co. deed register, grantor index TUVXYZ, 1815–1897; grantor index TUVXYZ, 1898–1917. Olmsted wrote that "about 90 houses are done or nearly so. Some 100 to 110 more are contracted for. . . . There are about 500 lots . . . cut + about 300 are sold. . . . They sold all the lots in each block as fast as the surveyor got it ready": John C. Olmsted, work notes, Dec. 18, 1896, OAP, job file, box 204.

34. Wallace P. Bache, letter to OOE, June 6, 1896, OAP, job file, box 204.

35. OOE, letter to Wallace P. Bache, June 9, 1896, OAP, letterbook A46.

36. John C. Olmsted, work notes, May 14, 1896 and Dec. 18, 1896, OAP, job file, box 204.

37. OOE, letter to Wallace P. Bache, June 9, 1896, OAP, letterbook A46; J. C. and F. L. Olmsted, letter to Wallace P. Bache, July 17, 1897, OAP, letterbook A53. In a letter written on the same day to Vandergrift's civil engineers, Olmsted asserted that "we wish to have the lithograph show our plan only, if the Company are willing": J. C. and F. L. Olmsted, letter to Wilkins and Davison, July 17, 1897, OAP, letterbook A53.

38. Similar to later real-estate developments, infrastructural improvements were intended as an advertisement. For a discussion of public services as a selling point in suburbs, see Jackson, *Crabgrass Frontier*.

FOUR: Settling the Vandergrift Peninsula

1. The crew consisted of Harry T. Henry, roller; Joseph McMullen Sr., first heater; Charles Smeltzer, pair heater; David Coulter Sr., rougher; Patsy Emmet George, matcher; James Jack, catcher; and Dean Sawyer, doubler. Other employees responsible for opening the mill included Jacob Smith, general superintendent and manager; W. D. Hall, mechanical engineer; A. F. Johnson, blacksmith; Tom Burkett, assistant blacksmith; William Watson, pipe fitter; William White, boilermaker; Samuel Gourley, carpenter and master mechanic; Otto Lindquist, chief machinist and steam expert; Andy Pinkerton, chief electrical engineer; Charles W. Henry, chief foundation and furnace builder; S. A. (Archie) Davis, mill superintendent: Owens et al., *First Seventy-five Years*.

2. Historian John Owens and others have argued that McMurtry was responsible for choosing the town's name. Local legend has it that Apollo I&S's investors urged McMurtry to name the town after himself, but McMurtry balked at the idea, believing that it was more appropriate to honor Captain Vandergrift: Owens et al., *First Seventy-five Years*.

3. "New Works of the Apollo Iron," *Iron Age*, 4–10.

4. The employment figures come from William Stanley Ray, *Tenth Annual Report of*

the Factory Inspector of the Commonwealth of Pennsylvania (N.p.: Commonwealth of Pennsylvania, 1900). In contrast, in 1899 Apollo I&S's older Apollo works employed 320.

5. Apollo I&S, *Vandergrift Ready*, 12–14, 17, 24, 18.

6. Ibid., 27, 26. The selective sales policy also covered the sale of commercial and, moreover, industrial lots; other industries would locate in the town "if we choose to sell them the land": Apollo I&S, ibid., 20.

7. Ibid., 20.

8. Ibid., 19, 31, 32.

9. The company made available one thousand shares valued at $100 each. Nine of these shares were held by the officers, who included J. J. Vandergrift's Penn Tube partner Joshua Rhodes, temporary president (1 share); Verle Preston, temporary vice president (1 share); J. B. Vandergrift, temporary secretary (1 share); and Wallace P. Bache, the man who had initially contacted Frederick Law Olmsted's firm, treasurer (1 share). The remaining stockholders were J. J. Vandergrift (1 share), W. B. Rhodes (1 share), J. J. Vandergrift's son Samuel H. Vandergrift (1 share), J. J. Vandergrift's personal secretary James I. Buchanan (1 share); and George McMurtry (1 share). McMurtry was trustee for the remaining 991 shares.

10. Apollo I&S, *Vandergrift Ready*, 28; West. Co. corporation register, book 1, 337–39.

11. There are two discrepancies between the information about sales published by Apollo I&S and the deeds that were filed at the Westmoreland County Courthouse in Greensburg: (1) the date on which lots were first made available to Vandergrift buyers; and (2) discrepancies in the number and value of lots sold. As to (1), *Vandergrift Ready* says that the sales started on June 8, 1896, whereas the first deeds filed with the county bear the date July 17, 1896. There are several plausible explanations: the company may have chosen to wait to issue deeds until after several lots had been purchased to cut down on legal and processing costs; it would thus have been possible to process several deeds at one time; the deeds may also not have been printed and ready until that date. Another possibility is that the company wanted to file several lots at once to make it appear that the venture was on the road to success. See West. Co. deed register, grantor index TUVXYZ, 1815–1897; grantor index TUVXYZ, 1898–1917. As to (2), according to the county deed records, 152 individuals purchased 218 lots worth $220,387 on July 17, 1896—figures slightly lower than those in *Vandergrift Ready*, where Apollo I&S states that 276 lots worth $275,013 had been sold on June 8, 1896. Whatever the reason for this discrepancy, 17% of the 814 lots that the company made available were definitely sold and legally titled on July 17, 1896. Moreover, according to county mortgage records, the VI&L issued mortgages to 138 of the 152 first-day buyers. Buyers had a three-month grace period before payments started, after which they paid back the principal at 6% interest in sixteen quarterly installments: West. Co. mortgage books, vol. 88.

12. One was roller Harry T. Henry, who had been in charge of the first test of the Vandergrift mill. The other two rollers, James Marshall and Thomas McNutt, were permitted to buy more than two Vandergrift lots, suggesting that they, too, may have been loyal to McMurtry. Information concerning particular Vandergrift, Vandergrift Heights, and Morning Sun residents and properties was pieced together from tax-assessment records, the 1900 and 1910 U.S. federal manuscript census schedules, and property deeds. For Westmoreland County, the annual, commonwealth-mandated tax-assessment records

list residents who were "gainfully" employed as well as all property owners. For the employed, occupations and a tax rate are given. For property owners, the location of the property and its assessed value are also given. The federal manuscript census, which gives occupational data as well as information on housing tenure, profiles entire households, including those who did not own property or who were not employed. No information on the value of property is given. Property deeds not only list buyers, sellers, and the date that property was exchanged, but many times they also list previous owners, the dates on which the property changed hands, and references to other deed books in which previous transfers are recorded. For several properties, I traced their histories. In many instances, these histories revealed complications such as land repossession, property sales at sheriff's auctions, family feuds, and subdivision of single properties. They underscore the dynamic and complex nature of the urban property market.

13. Holdsworth found that real-estate developers often sold specific lots to create an evenly spread spatial pattern of lot purchases; see Deryck W. Holdsworth, "House and Home in Vancouver: The Emergence of a West Coast Urban Landscape, 1886–1929" (Ph.D. diss., University of British Columbia, 1981).

14. Johnston paid $1,421 for one and one-half lots. In 1900, his property (lots and buildings included) was assessed a value of $7,500.

15. Daugherty had trained for only six months to become a roller: Owens et al., *First Seventy-five Years.*

16. Therefore, it is not safe to correlate ownership with occupancy.

17. J. J. Vandergrift died in 1899. Rhodes held twenty-one lots worth a total of $10,000 and nine houses worth approximately $1,650 each.

18. Margaret F. Byington, *Homestead: The Households of a Mill Town* (New York: Russell Sage, 1910).

19. McMullen lived on an expensive Washington Avenue lot, which he owned. On May 10, 1898, he purchased the Franklin Avenue lots. Two years later he sold his Washington Avenue lot to Milton Uncapher.

20. For a discussion that compares Vandergrift's alley-housing stock to that of other Pennsylvania industrial communities, see Anne E. Mosher and Deryck W. Holdsworth, "The Meaning of Alley Housing in Industrial Towns." Rentership decreased in Vandergrift by 5% in 1910 due to the large number of houses built for owner-occupiers between 1900 and 1910.

21. Fifty-three households employed female servants. In 1900, most of these servants were in their late teens and early twenties, came from the surrounding countryside, and were Pennsylvania-born. Three were African Americans.

22. In this respect, the households of Vandergrift's steelworkers were similar to middle-class households elsewhere in southwestern Pennsylvania; see Ethel Spencer, *The Spencers of Amberson Avenue* (Pittsburgh, Pa.: University of Pittsburgh Press, 1983).

23. The census is biased in favor of nuclear families given that the household is the primary unit of analysis. For a discussion of the role that the "extended family" played in industrialization and urbanization, see Tamara Hareven, *Family Time and Industrial Time: The Relationship between Family and Work in a New England Industrial Community* (Cambridge: Cambridge University Press, 1982).

24. There were three hotels in Vandergrift. Two, on Columbia Avenue, were residential; a transients' hotel was located next to the train station.

25. See Byington, *Homestead;* Bell, *Out of This Furnace;* and Ewa Morowska, *For Bread*

with Butter: Life-worlds of East Central Europeans in Johnstown, Pennsylvania, 1890–1940 (Cambridge: Cambridge University Press, 1985).

26. Beers, *Armstrong County*, 460.

27. The biographical sketch of Dr. Howard M. Welsh (William Welsh's son and E. H. Welsh's brother) went on to say that William Welsh became "one of the representative business men" in Vandergrift: "He is largely interested in dealing in real estate and is vice president of the Citizen's National Bank, of which he was one of the organizers": Beers, *Armstrong County*, 491.

28. Apollo I&S, letter (dictated by Veryl Preston) to OOE, Sept. 10, 1895, OAP, job file, box 204. VL&I, *Vandergrift: Its Homes and Industries* (n.p., 1900), n.p.; VB council minutes, vol. 1, May 18, 1898, June 11, 1898, and May 24, 1899. For a discussion of the reemergence of "plebeian" Fourth of July celebrations during the 1880s and the holiday's connections to the labor movement in the Pittsburgh district, see Couvares, *Remaking of Pittsburgh*.

29. VB council minutes, vol. 1, Nov. 20, 1897.

30. Ibid., Mar. 5, 1898; Owens et al., *First Seventy-five Years*.

31. Four (Barton Townsend, William McKim, John Johnston, and George Shaver) were rollers; William Watson was a pipefitter. Oscar Lindquist was the exception on the council; he was department superintendent in the sheet mill.

32. Words of praise for McMurtry and his donations to Vandergrift churches were a standard part of the church histories that were submitted for inclusion in Owens's 1972 Vandergrift town history. In historical context, however, such generosity was interpreted differently. On Feb. 6, 1897, an *Apollo Herald* article stated:

> If reliance can be placed on the veracity of an employee, the widely advertised generosity of the Vandergrift [Land and] Improvement Company in donating $7,000 to a Presbyterian Church at that place, providing the congregation would realise a like sum, proves to be a purely business venture at the expense of its employees who have been assessed a pro rata amount to be deducted from their wages. The informant is a roller in the mill referred to and he claims his share of the church fund was $20.

Apollo Herald, Feb. 6, 1897, quoted in Owens et al., *First Seventy-five Years*.

33. In Vandergrift, 7.7% of workers were foreign-born; in Apollo, 6.3% were foreign-born: West. Co. deed register, grantor index TUVXYZ, 1897–1917.

34. West. Co. register of plans, book 1, n.d.; *Apollo Herald*, Feb. 6, 1896, quoted in Owens et al., *First Seventy-five Years*. The terms of sale were reported by Ida Tarbell in *New Ideals in Business* (New York: Macmillan, 1916), 150.

35. In 1900, however, Thomas R. Hartley of Pittsburgh, J. J. Vandergrift's stepson, owned ten houses and ten lots in Vandergrift Heights: West. Co. deed register, grantor index TUVXYZ, 1815–1897.

36. There is nothing in the deeds to establish which lots were to be used for commercial purposes: West. Co. deed register. From a mill employee's perspective, the Longfellow lots were the logical place in which to place a business district. But from the perspective of the people who would probably use the businesses most—the women of Vandergrift Heights, doing marketing—this was not the best location; to shop, they would have to walk down from their houses and, laden, trudge back up the hill.

37. Corner lots within the new addition were $200.

38. John C. Olmsted, work notes, May 2, 1895, OAP, daybook E5. It also appears that not a single lot was transferred to a black family. There were probably only two black steelworkers in the area in 1900, William Cochran and his son Clare. Both lived in Washington Township. Several young black women and men worked as domestics in private homes and hotels.

39. In Vandergrift Heights, 672 residents were listed in the census as employed; 102 of the employed were foreign-born. Only 50 were from places other than Northwest Europe or Canada.

40. The average age of first-day buyers in Vandergrift Heights was thirty-one; in Vandergrift it was thirty-three. Vandergrift Heights was incorporated as a borough on Dec. 8, 1897. It is unknown if Heights operatives played roles analogous to Vandergrift craftsworkers in local politics. My search for the Heights municipal records was unsuccessful (according to Owens, they were destroyed or lost).

41. In addition to the low number of single boarders living with families, only fifteen households employed live-in servants (one of whom was black). Family members in an additional eight households supplemented the household income by "working-out" as servants in other households.

42. Only one boardinghouse was rented (by a non-English-speaking, Russian Polish galvanizer who had been in the United States for a decade). The others were owned by means of mortgages—two by Italian laborers who spoke English and had become U.S. citizens, another by a German Polish bundler (also a U.S. citizen), and two by Pennsylvanians.

43. In addition to the boardinghouses, there were only four Russian Polish, eight Italian, and eleven German Polish households in Vandergrift Heights.

44. Owens et al., *First Seventy-five Years.*

45. J. C. and F. L. Olmsted, letter to Wallace P. Bache, July 17, 1897, OAP, letterbook A53.

46. "Vandergrift," *Iron Age*, June 17, 1897, 11.

47. On my first visit to Vandergrift, the mayor arranged a meeting with several Vandergrift residents (Mar. 7, 1986). During this meeting, I was told about the social divisions that had existed between the Borough and the Heights well into the 1950s. The local image of Vandergrift Heights was one of an Italian, Democratic, and Catholic community, whereas Vandergrift was American, Republican, and Protestant. One elderly informant spoke of how during his youth the young people from the "respectable" lower part of town (Vandergrift) were discouraged from socializing with residents of the Heights.

48. Robert Szymczak, "East Vandergrift: Across the Atlantic to Morning Sun: An Informal History of East Vandergrift," in Owens et al., *First Seventy-five Years;* West. Co. deed register, vol. 100, 338; vol. 197, 160; vol. 199, 87; plan filed July 20, 1897, West. Co. register of plans, book 1.

49. The Chambers-to-Beamer land transfer of May 23, 1896, is recorded in the West. Co. deed register, vol. 249, 442.

50. Owens et al., *First Seventy-five Years;* West. Co. deed register, grantor index B, 1898–1917.

51. One of the live-in servants was an East European working for a Russian Polish

family. The remainder were Pennsylvania-born. Three households also had daughters who worked as servants in other households. One of these daughters was born in Poland.

52. Cambria City (in Johnstown), Braddock, Homestead, Sharon, Pittsburgh's South Side, and Avonmore each had flats. Invariably, "the poorer working people" lived in these low-lying areas: Davis, *Iron Puddler*, 19.

53. Owens et al., *First Seventy-five Years;* VB council minutes, vol. 1, Aug. 15, 1899.

54. VL&I, *Vandergrift*, n.p. The booklet had an embossed cover and was printed on heavy bond paper. No byline or credit was given to the artist.

55. According to Owens, Kiskiminetas Lodge 617 of the Grand Lodge of Free and Accepted Masons of Pennsylvania received its charter on June 30, 1898. Charter members included mill superintendent Addison Beale and his brother Frank, mill manager Stewart A. Davis, rollers John F. Johnston and James Whitehead, pair heater John S. Barr, sheet heater Ezraiah Phillips, chief mill clerk Robert G. Scott, building contractor Frank C. Jones, merchants James E. Sutton, Milton Uncapher and Van T. Shepler, and attorney James S. Whitworth. Rollers and heaters were clearly members of the urban elite. Notably, all of the charter members of the Masons except Phillips, Shepler, and Whitworth had also been first-day Vandergrift lot buyers. The Odd Fellows received its charter the following year, on July 22, 1899, and its charter members included merchant George Hunger, mill superintendent Oscar Lindquist, rollers David Artman, David George, Samuel Kinnard, and John Lock, and pair heater George Chapman: VL&I, *Vandergrift*, n.p.; Owens et al., *First Seventy-five Years;* U.S. Bureau of the Census, *Twelfth Census, 1900: Population Manuscripts*, Pennsylvania, West. Co.

56. VL&I, *Vandergrift*, n.p.

FIVE: The Steel Strike of 1901

1. Arm. Co. deed register, Apollo I&S to American Tin Plate Co., deed, Jan. 10, 1899.

2. Hogan, *Economic History*, 1: 291. Moore's goal was to control the entire tin industry and, hence, prices. Not only would this be good for National Biscuit, a major consumer of tin for biscuit boxes, but Moore could then indirectly influence the processed-food industry, including some major producers like H. J. Heinz.

3. Hogan, *Economic History*, 1: 290, 292.

4. The second largest works in American Sheet Steel had a capacity of 54,200 gross tons per annum. Not including the Vandergrift works, the average size of American Sheet Steel companies was 25,047 gross tons per annum: American Iron and Steel Association, *Directory* (1901); *Iron Age*, Apr. 5, 1899, 32. The directors of American Sheet Steel were McMurtry, W. T. Graham, Wm. B. Leeds, Wm. H. Moore, D. G. Reid, Henry Wick, R. M. Gilbert, W. E. Reis, J. A. Topping, R. J. Beatty, J. G. Battelle, M. I. Arms, Jas. H. Moore, A. W. Brown, and F. S. Wheeler.

5. American Steel Hoop consisted of nine companies. Four were located in Pittsburgh, and Monessen, Duncansville, and Sharon, Pennsylvania, each had one mill; two mills were located in Ohio. Of the Moore companies, American Steel Hoop was the most spatially concentrated: *Iron Age*, Apr. 12, 1899, 36.

6. The Inner Six were Moore, Graham, Reid, Wheeler, Leeds, and Reis: Hogan, *Economic History*, vol. 1.

7. Federal Steel had steel plants in Illinois, Ohio, and Johnstown, Pennsylvania; mining interests in Minnesota; two railroads in the Great Lakes region; and a steamship line.

American Bridge consisted of twenty-five plants. Six were located in Pennsylvania; seven in New York; four in Ohio; two in Illinois; and one each in Connecticut, Delaware, Minnesota, Indiana, Wisconsin, New Jersey, Michigan, Missouri, and Alabama: Hogan, *Economic History*, 1:274.

8. Carnegie Steel operated three steelworks in Pittsburgh and one each in Homestead, Rankin, Munhall, Cochran, and Braddock: Hogan, *Economic History*, 1:251.

9. Carnegie's move to expand into finished tubes and rods was a response to the vertical integration that was starting to take place in the tube and rod industries. National Tube was building its own blast and open-hearth furnaces, as was American Steel and Wire. Previously, Carnegie had controlled the supply of iron and steel ingots to both National Tube and American Steel and Wire, and this was a way for the companies to break free from Carnegie's grasp. At roughly the same time that other steelmakers began looking for a way to stop Carnegie's steel-industry expansion plans, the PRR and the New York Central Railroad went on a stock-buying spree to end Carnegie's Pittsburgh basing-point price-fixing system, a deal he had managed to secure with the railroads whereby all shipments of steel, no matter where they had been produced, were charged as if they originated in Pittsburgh. Both railroad companies placed as many of their representatives as they could on the boards of all of the railroad companies that participated in Carnegie's rebate system. These directors voted the system out of existence. As a consequence, Carnegie decided to build his own railroad from Pittsburgh to Harrisburg. From the railroads' point of view, such a move would be disastrous for their business and Carnegie had to be stopped.

10. Carnegie exchanged $320 million of Carnegie Company stocks and bonds for a little more than $400 million in U.S. Steel securities and received another $80 million as compensation for two years of profits. For a superb account of Carnegie's business life, see Harold Livesay, *Andrew Carnegie and the Rise of Big Business* (Boston, Mass.: Little, Brown, 1975).

11. Schroeder, *Growth of Major Steel Companies*, 39; Hogan, *Economic History*, 2:476; U.S. Congress, Senate, *Labor Conditions in the Iron and Steel Industry*, Senate Doc. 20, 62nd Cong., 2nd sess., 1911, 497; American Iron and Steel Association, *Directory* (1901), 2.

12. Brody, *Steelworkers in America*, 61.

13. Ibid., 61.

14. U.S. Congress, Senate, *Labor Conditions*, 498, 500.

15. Ibid., 501; *Iron Age*, July 4, 1901, 20.

16. U.S. Congress, Senate, *Labor Conditions*, 503.

17. Ibid., 505. The only information that I could find on Veryl Preston was in the 1900 U.S. federal manuscript census. In 1900, Preston was listed as an iron manufacturer renting a house at 3 Colonial Place, Pittsburgh. A resident of the Twentieth Ward, Preston lived only a few blocks away from 5302 Westminster Street, the home of Eugene Pargny, who later became superintendent of all American Sheet Steel mills in the Kiskiminetas Valley; Henry R. Cornelius, aged thirty-five, an iron agent who was a first-day investor in both Vandergrift commercial and residential property (4735 Bayard); and the Spencers, of Amberson Avenue: Spencer, *Spencers of Amberson Avenue*.

18. U.S. Congress, Senate, *Labor Conditions*, 506.

19. *National Labor Tribune*, July 11, 1901, n.p., quoted in Brody, *Steelworkers in America*, 84.

20. *Vandergrift Citizen*, July 20, 1901.

21. All the following quotes, including that from the McMurtry telegram, are from the July 17, 1901, *Citizen*.

22. *Amalgamated Journal*, July 25, 1901, 4.

23. This article was reprinted in the *Amalgamated Journal*, July 25, 1901, 4. Apollo Borough tax-assessment records show that Klingensmith entered the Apollo workforce as a laborer in 1895, aged twenty-two. The following year, he was listed in the tax-assessment records as a pair heater. I could find no evidence that he actually became a roller. Nevertheless, Klingensmith had been one of the laborers to benefit from McMurtry's policy of promoting laborers to semiskilled positions during the 1893 lockout. Unlike many of his co-workers, however, Klingensmith chose to remain in Apollo after McMurtry opened Vandergrift. In the 1900 federal manuscript census he lived in Apollo and worked for American Sheet Steel as a sheet heater. According to Apollo Borough tax-assessment records, John Buzzard, aged thirty-three, was a roller who had apparently come to the Apollo mill as a replacement roller in 1894. Charles Lloyd was listed as a laborer in the Apollo mill in 1893. Arm. Co., Apollo Borough tax-assessment records, 1893, 1894.

24. *Amalgamated Journal*, July 25, 1901, 4.

25. *Iron Age*, July 10, 1901, 23; Brody, *Steelworkers in America*.

26. Brody, *Steelworkers in America*.

27. *Amalgamated Journal*, Aug. 8, 1901, 1; Aug. 22, 1901, 1.

28. Ibid., Sept. 19, 1901, 1; Brody, *Steelworkers in America*, 68.

29. *Iron Age*, Aug. 22, 1901, 26.

30. "Vandergrift: A Workingman's Paradise," *Iron Age*, Nov. 21, 1901, supp. 6–9.

31. *Vandergrift Citizen*, Nov. 2, 1901.

32. *New York Times*, Oct. 12, 1902, 12.

33. Daugherty's speech continued:

> "The founder of Vandergrift, a lovable character, and possessor of many noble qualities, who by his generous deeds has proved himself a true friend of the workingman." Behold his portrait encircled by a wreath of laurel leaves, emblematic of the success that has so signally crowned his every effort. We thank him to-day for Vandergrift, we thank him for our beautiful homes, and rubber-tired carriages, we thank him for ponies and pony carts for the children, these are luxuries that many enjoy, but most of all we thank him for that which we all have and enjoy,—a full dinner pail. We are grateful too that when Christmas comes we are not made subjects of charity by having a car load of turkeys thrown from the top of some high building for us to scramble for, but that we have the money saved from our daily toil to buy such as we need.

34. *Vandergrift Citizen*, Oct. 4, 1902.

SIX: Growing Pains for a "Model Town"

1. Ultimately, Vandergrift became only a thirty-nine-mill plan: Owens et al., *First Seventy-five Years;* "Vandergrift: A Workingman's Paradise," *Iron Age*, Nov. 21, 1901, 6.

2. E. M. Thierry, "Wonderful Town of Prosperous Toilers," *Leslie's, The People's Weekly* 106 (1912): 106–7, 109, 111. The manuscript census is not helpful in calculating the number employed in the Vandergrift mill in either 1900 or 1910. Enumerators did not record

place of employment in 1900 and failed to specify exact places of employment in 1910. Vandergrift residents may have worked in any one of a number of steel mills in the Kiskiminetas Valley, especially after an intra-urban rail line was built in 1906 over the old Pennsylvania canal bed between Leechburg and Saltsburg; see Armstrong County Historical and Museum Society, *Armstrong County, Pennsylvania: A Collection of Topical and Family Sketches* (Kittanning, Pa.: Armstrong County Historical and Museum Society, 1980), 24. McMurtry approved the sale of a large tract of land on the northeastern side of the Vandergrift peninsula to United Engineering and Foundry of Pittsburgh in 1901. This company produced iron and brass castings and specialized in manufacturing rolls for rolling mills. No approximate employment figures are available for this firm until 1909, when the Sanborn Fire Insurance Co. recorded that the works had three hundred employees. The upshot was that Vandergrift residents now had another industrial employment option in the immediate vicinity. Residence in Vandergrift did not necessarily mean employment at American Sheet Steel or its successor American Sheet and Tin Plate.

3. "Vandergrift: A Workingman's Paradise," 8.

4. VB tax-assessment records, 1900, 1910; Vandergrift Heights Borough tax-assessment records, 1900, 1910; West. Co. deed register, vol. 475, 88, 91, 130, 225.

5. For a detailed tabular breakdown of property owners, renters, and mortgage holders in Vandergrift, Vandergrift Heights, and East Vandergrift in 1910, see Anne E. Mosher, "Capital Transformation and the Restructuring of Place: The Creation of a Model Industrial Town" (Ph.D. diss., Pennsylvania State University, 1989), table 6.2.

6. This property abstract was constructed from deeds registered in Westmoreland County, the federal manuscript census of population, the Sanborn Fire Insurance maps for Vandergrift, and VB tax-assessment records.

7. VB tax-assessment records, 1910.

8. West. Co. deed register, vol. 263, 366. Beck purchased his lot in 1896 for $1,091. West. Co. deed register, vol. 268, 110.

9. In conducting my research, I faced a major problem over the issue of wages for all of Vandergrift's workforce—American and immigrant, skilled and unskilled. Several readers of my 1995 article in the *Annals of the Association of American Geographers* as well as participants in a 1997 staff workshop of the Pennsylvania Historical and Museum Commission have suggested that wage data would pin down more closely the motives of McMurtry, Apollo I&S, and American Sheet Steel for building and sustaining a model town: Mosher, "Something Better than the Best." Were the mill owners acting benevolently or malevolently toward their workforce? Higher wages than the regional norm might reflect benevolence; lower wages might suggest that the company figured it had done enough for workers by providing infrastructure and a model-town design—it could get away with paying low wages because mortgages and fixed investments would keep workers in line. Anecdotal material suggests that skilled Vandergrift workers believed they were well paid, but without the mill payroll it is impossible to corroborate this quantitatively. The only pertinent wage information that I found for the mill was in the borough council's minutes on the ongoing discussion about laborer wage rates for its street crews. For several years, the going rate was sixteen cents per hour, a figure deemed commensurate with valley steel-mill rates. I am unwilling to use this single piece of evidence to justify using wage scales from other local steelmills (or from government sources that mask mill identity or are averages) as a surrogate for Vandergrift. More importantly, even if la-

boring wages were commensurate, it may not have been the same for semiskilled and skilled wages. The answer to the question "benevolent or malevolent?" must be built upon other evidence, which so far has not been found.

10. VB council minutes, vol. 1, Mar. 5, 1906; vol. 2, Sept. 4, 1911, Aug. 7, 1911, Oct. 7, 1912, Mar. 9, 1914, June 1, 1914.

11. During my visits to Vandergrift, several residents of Italian descent told me variations on the same story: "When my grandfather arrived in America, a man met him at the dock in New York and told him to go to Vandergrift, Pennsylvania: 'There are plenty of jobs because Vandergrift is the biggest steel mill in America, it is a nice place to live because it is in the countryside, and there are many other Italians living there.'"

12. In 1910, women constituted 13% of the entire Vandergrift peninsula workforce (222 women): twenty-eight held professional positions (nurse, reporter, librarian, teacher, etc.). Four worked in industrial occupations (e.g., newspaper typesetter, industrial baker, heater's helper). The vast majority (86%) were employed as servants, sales clerks, boardinghouse keepers, bookkeepers, dressmakers, waitresses, and in other clerical, sales, and service occupations: U.S. Bureau of the Census, *Thirteenth Census, 1910: Population Manuscripts*, West. Co.

13. *Vandergrift Citizen*, Feb. 28, 1916.

14. Vandergrift Borough's First Precinct, the area bounded by Lincoln, Custer, Washington, Columbia, and Sherman Avenues, voted 135 for and 90 against consolidation, reflecting that much of the electorate in that part of town rented property and owned smaller lots. Any tax burden placed on the borough by consolidation would have had less of an impact on them. In the Second Precinct, which included the eastern half of town as well as newer residential districts that were being built, the proposition lost 88 to 131: VB council minutes, vol. 3, July 7, 1915.

15. Because of the legal consolidation of Vandergrift Borough and Vandergrift Heights Borough that occurred in July 1915, council membership had doubled, to fourteen; the seven members of the Vandergrift Borough Council were joined by the Vandergrift Heights Council: VB council minutes, vol. 3, Sept. 6, 1915.

16. Jon C. Teaford, *The Unheralded Triumph: City Government in America, 1870–1900* (Baltimore, Md.: Johns Hopkins University Press, 1984).

17. See VB council minutes, vol. 1, Aug. 5, 1905, Oct. 8, 1905, May 1, 1906, Feb. 4, 1907, Mar. 27, 1910, and Aug. 7, 1912.

18. Ibid., vol. 1, May 24, 1899, Apr. 6, 1903, Nov. 7, 1903, Dec. 5, 1905, and Feb. 6, 1904.

19. The ordinance fixing the fire limits was read at the July 9, 1898, council meeting and was reprinted in the *Apollo Herald* that month. The ordinance was passed into law at the Aug. 13, 1898, council meeting. VB council minutes, vol. 1, July 9, 1898, Aug. 13, 1898, Nov. 11, 1899.

20. The council minutes for Vandergrift Heights have been lost; VB council minutes, vol. 1, May 12, 1900.

21. "George G. McMurtry Dies," 7; "George G. M'Murtry Dies at Sea Resort," 1.

22. VB council minutes, vol. 3, Sept. 6, 1915.

23. Ibid., vol. 1, May 4, 1908; vol. 3, May 7, 1917, Jan. 6, 1919, Feb. 3, 1919, and May 5, 1919.

24. See the *Apollo Sentinel*, 1909. Beers, *Armstrong County*, 15; F. W. Jackson and R.

H. Ankeny, *History of First Presbyterian Church of Apollo, Pa.* (Apollo, Pa.: n.p., 1925; revised ed. Apollo: n.p., 1950), 29; Henry, *1816–1916*, 56. The 1900 manuscript census data for Apollo corroborate these findings.

25. Tarbell, *New Ideals in Business*, 155.

26. In the late 1900s, the only steel town that could rival Gary in terms of the size and intensity of steelworks concentration and integration was Essen, Germany: Raymond A. Mohl and Neil Betten, *Steel City: Urban and Ethnic Patterns in Gary, Indiana, 1906–1950* (New York: Holmes & Meier, 1986).

27. Mohl and Betten, *Steel City*, 13.

28. Eugene Buffington, "Making Cities for Workmen," *Harper's Weekly* 53 (May 8, 1909): 15–17. Vandergrift was used by Buffington as an example where corporate capital allowed workers to "help themselves," Vandergrift thus being part of the debate over the extent to which manufacturers should become involved in social-welfare programs.

29. Buffington, "Making Cities for Workmen," 16. His informants were incorrect about the level of home ownership, but the rest of Buffington's assessment was correct for Vandergrift.

30. Ibid., 16.

31. The town was model in yet another sense. At the 1904 St. Louis World's Fair, Apollo I&S was awarded two gold medals for its "industrial betterment" scheme and for the way in which it provided "housing of the working classes." There is no record of the specific content of the fair exhibits: James H. Lambert, *The Story of Pennsylvania at the World's Fair: St. Louis, 1904* (Philadelphia: Pennsylvania Commission, 1905).

32. VB council minutes, vol. 1, Feb. 26, 1902, May 14, 1902, May 7, 1906, Sept. 14, 1910; vol. 2, Aug. 7, 1911.

33. Mohl and Betten, *Steel City*, 17–19. Mohl and Betten cite the *Gary Daily Tribune* as the source of the "lawless men" quote.

34. U.S. Congress, House of Representatives, Committee on the Investigation of the United States Steel Corporation, *Hearings*, 62nd Cong., 2nd sess., 1912, 3142; *Amalgamated Journal*, July 15, 1909.

35. U.S. Congress, House, *Hearings*, 3143.

36. Ibid., 3143–45.

37. *Amalgamated Journal*, Aug. 12, 1909, 1.

38. Ibid., Sept. 9, 1909, 1.

39. Ibid., Oct. 9, 1909, 3; Oct. 14, 1909, 3.

40. "The Town of Vandergrift, an Industrial Settlement Owned and Governed by Workmen," *Craftsman* 17 (1910): 566; Tarbell, *New Ideals in Business*, 119.

41. Thierry, "Wonderful Town of Prosperous Toilers." In the absence of police records, it is difficult to assess the validity of the statement that no crime could be found in Vandergrift. There are indications from the council minutes that some problems required police action. Extra police were hired to keep the peace during Halloween, the Fourth of July, and labor disputes. And councilmen charged in 1905 that Burgess George Hunger had embezzled borough funds; see VB council minutes, vol. 1, Dec. 17, 1904, Jan. 7, 1905, Mar. 11, 1905, Apr. 1, 1905, May 6, 1905, and June 3, 1905. Union organizers would undoubtedly have contested the statement that the peace had never been disrupted. Some residents, too, would have disagreed: "Town of Vandergrift," 565.

42. Tarbell, *New Ideals in Business*, 151–52. One of Tarbell's first examinations of in-

dustrialization was her 1904 history of the Standard Oil Co.: Tarbell, *History of Standard Oil Company*. For an excellent biography, which places Tarbell firmly within historical and geographical contexts of late-nineteenth- and early-twentieth-century social-reform movements as well as western Pennsylvania and the industrial northeast, see Kathleen Brady, *Ida Tarbell: Portrait of a Muckraker* (Pittsburgh, Pa.: University of Pittsburgh Press, 1989); *Vandergrift Citizen*, Apr. 19, 1915.

43. Tarbell, *New Ideals in Business*, 152.

44. Ibid., 153.

45. T. E. Deal and A. A. Kennedy, *Corporate Cultures: The Rites and Rituals of Corporate Life* (Reading, Mass.: Addison-Wesley, 1982).

46. The United Steel Workers organized the Vandergrift workforce in 1936. The logic regarding the relationship between home ownership and worker complacency is exactly the same as that which underpinned William Levitt's massive post–World War II suburban real-estate ventures. Historian Barbara Kelly quotes him as saying "homeowners do not have time to be Communists"; see her excellent historical analysis of Levittown, *Expanding the American Dream: Building and Rebuilding Levittown* (Albany: State University of New York Press, 1993); see also David Harvey, "Labor, Capital, and Class Struggles around the Built Environment in Advanced Capitalist Societies," in Kevin R. Cox, *Urbanization and Conflict in Market Societies* (Chicago, Ill.: Maaroufa, 1978), 9–37.

47. John Nolan, *New Ideals in the Planning of Cities, Towns, and Villages* (New York: American City Bureau, 1919).

48. For an excellent discussion regarding Vandergrift's place in the entire sweep of U.S. company-town history, see Margaret Crawford, *Building the Workingman's Paradise: The Design of American Company Towns* (London: Verso, 1995). Crawford, however, mistakenly attributes the Vandergrift plan's design to Frederick Law Olmsted Sr.

Epilogue

1. The dedication ceremony for the historical marker was captured on videotape and supplied to me by Eugene Iagnemma: "Vandergrift Historical Marker Dedication, May 17th, 1990," in the author's videotape collection, Department of Geography, Syracuse University.

2. Several books discuss the 1970s and 1980s round of industrial restructuring in the U.S. steel industry; e.g., see Hoerr, *And the Wolf Finally Came;* Serrin, *Homestead;* and the epilogue of Mark Reutter, *Sparrow's Point: Making Steel* (New York: Summit Books, 1988).

3. In late-2001, when the company's oil-related components splintered off so that Marathon Oil would exist as an independent company, USX underwent another name change. It is currently known as USS.

4. See *Vandergrift News-Citizen*, 1986–89.

5. Ironically, this same situation was repeated in Gary, Indiana, in 1989. During the late-1980s, Gary's USX mills were refurbished and automated with new steelmaking technologies. The USX workforce decreased from a one-time high of twenty-one thousand people to seventy-five hundred. Furthermore, many workers in the USX mills were not employed directly by USX; they were out-of-town contract workers employed by firms located in places other than Gary. Gary's mayor stated publicly that this development had

been "a great success story for the company, but it has been a painful experience for us": William E. Schmidt, "A Steel City Needs Help Despite Big Steel's Comeback," *New York Times*, Sept. 4, 1989, 1.

6. For a discussion of de-industrialization in the Monongahela Valley, see Hoerr, *And the Wolf Finally Came* (1988).

7. "Vandergrift in History Books," *Valley News Dispatch*, June 19, 1995.

8. Lambert, *Story of Pennsylvania*, 360.

9. "A Walking Tour of Vandergrift, Pa."—pamphlet published by the Victorian Vandergrift Museum and Historical Society, n.d. (c. 1990).

10. Kenneth M. Blose (principal author), the 1995 Vandergrift Centennial Committee, and the Victorian Vandergrift Museum and Historical Society, *Vandergrift, Pennsylvania: Something Better than the Best—The Story of America's First Successful, Worker-owned Planned Community* (n.p., 1996).

11. Both the historical marker and the centennial book play somewhat fast and loose with Frederick Law Olmsted Sr.'s not having had a direct hand in designing this town (see Blose, *Something Better than the Best*, 20–22). Even Frederick Law Olmsted Jr. played a very minor role, having been brought into the landscape firm late in the planning and construction process. The credit for the design should be shared—between John Charles Olmsted, Charles Eliot, civil engineers Wilkins and Davison, and McMurtry and his secretary Wallace Bache.

12. Blose, *Something Better than the Best*, 229.

13. Historian John Bodnar makes a useful distinction between vernacular (popular) memory and official public history. These versions of the past have interacted at a variety of spatial scales as "memory politics": John Bodnar, *Remaking America: Public Memory, Commemoration, and Patriotism in the Twentieth Century* (Princeton, N.J.: Princeton University Press, 1992).

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